ANNUAL ACCOUNTABILITY REPORT FOR 2004 ACTIVITIES IN SUPPORT OF MISSOURI RIVER INTERAGENCY ENDANGERED SPECIES MEMORANDUM OF AGREEMENT



Photo provided by Herb Bollig, USFWS, of Rob Holm, Garrison Dam NFH, with a pallid sturgeon taken for spawning from the confluence of the Yellowstone and Missouri rivers

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Executive Summary

The Missouri River Endangered Species Memorandum of Agreement (MOA) identified specific actions for the three participating agencies to better manage and conserve four rare species (bald eagle, least tern, piping plover, and pallid sturgeon) found in and along the Missouri River in South Dakota. Accomplishments during the first two years of the MOA were reported in previous documents (Dowd Stukel 2003, Dowd Stukel 2004). The third year's accomplishments included the continuation of a number of coordination activities, both within and among agencies to implement the MOA in specific, on-the-ground activities. This document describes these actions, such as the continued implementation of internal and interagency protocols and activities that directly supported species recovery, which included protection of least tern and piping plover nesting colonies and formation of specific management teams to plan for long-term state management activities for the four species.

Significant progress continued during the third year of the five-year MOA in enhancing outreach activities, in coordinating law enforcement efforts during critical periods of the tern and plover nesting period, and in identifying specific conservation needs for wintering bald eagles, least terns, and piping plovers. The three South Dakota management teams, which included participation from a variety of entities, all met during 2004.

The South Dakota Department of Game, Fish and Parks (SDGFP) hired three seasonal employees to assist in least tern and piping plover nesting season activities, provided law enforcement presence during the tern and plover nesting season, implemented several environmental protocols, participated in interagency meetings of the South Dakota management teams, assisted with specific protection measures at least tern and piping plover nesting sites, continued outreach activities on all four species, assisted with permit needs related to pallid sturgeon stocking, began work on a 5-year contract to assess pallid sturgeon and the associated fish community in the Missouri River, and provided financial and logistical support for the interagency agreement to dedicate Carol Aron, a USFWS employee, to Missouri River state endangered species management planning.

The U.S. Fish and Wildlife Service (USFWS) Law Enforcement personnel in Pierre and Sioux Falls coordinated with the Corps of Engineers and SDGFP on disturbance complaints at tern and plover nesting colonies, assisted with nesting colony patrols during high visitation weekends, and provided training and guidance to other agencies. Lake Andes National Wildlife Refuge personnel conducted patrols along the Missouri River during the least tern and piping plover nesting seasons and conducted bald eagle nest surveys, bald eagle nest monitoring, and winter bald eagle surveys. USFWS Great Plains Fish and Wildlife Management Assistance Office continued to monitor pallid sturgeon populations in the lower Missouri River in South Dakota.

USFWS Ecological Service's Office personnel in Pierre participated in endangered species management planning, coordinated with and provided Section 7 consultant

input to other agencies on development activities with potential to impact Missouri River endangered species, provided input on Missouri River bank stabilization issues, helped fund bald eagle nest surveys, and continued participation in an interagency agreement that allowed a USFWS employee to coordinate the Missouri River endangered species planning effort.

The Corps of Engineers (Corps) provided tern and plover nesting season training at multiple sites along the Missouri River in Montana, North Dakota, and South Dakota; continued systematic tern and plover productivity surveys and made these data available on the Data Management System site for use by other agencies; implemented specific protection measures at tern and plover nesting sites, including installation of fencing and no-entry signs at relevant sites along the Missouri River; and participated on the South Dakota Least Tern and Piping Plover Management Team, the South Dakota Pallid Sturgeon Management Team and other MOA-related coordination meetings.

The Missouri National Recreational River staff helped coordinate and fund bald eagle flights, monitored bald eagle nests and fledglings, conducted least tern and piping plover surveys along the lower Niobrara River, participated in the development of the South Dakota endangered species management plans, and conducted information and outreach activities for the four species covered by the MOA.

Introduction

The Water Resources Development Act Public Law 106-53 transferred certain lands and recreation areas along the Missouri River to the South Dakota Department of Game, Fish and Parks (SDGFP). The Final Environmental Impact Statement contains an environmental analysis of this action, including consideration of endangered species impacts (U.S. Army Corps of Engineers 2001). As part of interagency coordination among SDGFP, the U.S. Fish and Wildlife Service (Service), and the U.S. Army Corps of Engineers (Corps), a Memorandum of Agreement (MOA) was drafted and signed by representatives of these three agencies (Appendix A). The MOA addresses conservation and management needs of four federal and state listed species that occur along the Missouri River in South Dakota; pallid sturgeon, bald eagle, least tern, and piping plover. This five-year agreement satisfied endangered species concerns related to the land transfer (U.S. Army Corps of Engineers 2001).

The MOA requires that the three signatory agencies assist in preparation of an annual accountability report, with SDGFP serving as the lead agency in preparing the report. The following text and appendices represent MOA accomplishments by the three respective agencies plus the National Park Service for calendar year 2004.

A. South Dakota Department of Game, Fish and Parks (SDGFP):

1. Will hire at least three seasonal employees each nesting season to be stationed where most needed to assist the U.S. Army Corps of Engineers (Corps) in monitoring and protecting least tern and piping plover nesting areas.

Accomplishments:

- SDGFP hired three seasonal employees and assigned them in the following manner Leslie Farnham, Yankton; Kelly Ness, Pierre, who returned for a second season; and Jacki Dollinger, Mobridge. The seasonals attended Corps training as needed and participated in all aspects of nesting season data collection, performed related duties as needed, and provided needed assistance in public information efforts along the Missouri River. Total SDGFP cost for seasonal time and per diem was \$13,843.22. Seasonals worked a total of 1,385 hours during the 2004 field season. EDS
- 2. Will provide law enforcement assistance where and when most needed to patrol for human disturbance at least tern and piping plover nesting colonies up to 10 potential weekend periods from Memorial Day weekend to August 15 (including the high use events such as the July 4 holiday). This would be a cooperative effort by both SDGFP and the U.S. Fish and Wildlife Service (Service) providing staff on the river for the tern and plover nesting period. The details of such efforts will be worked out on an annual basis and dependent on nesting locations and active recreation areas on the river.

- SDGFP spent the following amounts of time and associated expense to conduct Missouri River MOA activities during calendar year 2004:
 - Parks Division: 80 hours; \$1,088.31
 - Wildlife Division: 241 hours; \$4,675.19
 - Region 2: 27.5 hours; \$463.46
 - Region 3: 41.5 hours; \$767.62
 - Pierre: 172 hours: \$3,444.11
 - tern and plover seasonal employees: 1,385 hours; \$13,843.22
 - TOTAL SDGFP: 1,705 hours; \$19,606.72
 - TOTAL SDGFP monetary commitment for 2004, including GFP staff, summer technicians, and payment for interagency agreement to dedicate Carol Aron to Missouri River endangered species management planning: \$77,606.72
- Region 2 conservation officers reported only 16 hours of T & E species enforcement work for 2004. Again because of very low water conditions, traditional T & E nesting areas along the Missouri River experienced very little human disturbance this past season. Most hours worked were in conjunction with boating law enforcement efforts, whereby officers checked traditional areas for human disturbance and other violations. No cases were made relative to T & E species in the region.
- The Region 2 breakdown of hours is as follows:

- CO Griffith, Sully County: 10 hours of custodial visits
- CO Ohm, Buffalo/Lyman Counties: one hour, checking on a report of nesting bald eagles
- CO Tim Flor, Charles Mix County: 5 hours, custodial visits to North Point Recreation Area (several terns nesting at the area). Asked approximately 6 people to leave a restricted area (no case prosecuted).

Custodial visit defined: Times that Wildlife Conservation Officers checked known locations of tern and plover nesting sites for illegal entry, typically conducted while checking boaters and shore anglers.

DG

SDGFP Region 3 – Region 3 Conservation Officers spent considerable time and effort on the Missouri River patrolling tern and plover nesting areas. Most of the time spent was on weekends when public use of the river is the highest. Patrols were conducted in conjunction with recreational boating and fishing compliance checks. There were no violations witnessed by officers during their patrols but evidence of violations was seen. Most of the public contacted were aware of the nesting areas and restrictions. Individual Conservation Officer comments are listed below. MSm

Chad Morrow: Like last summer I conducted Tern and Plover enforcement while on the river checking recreational boaters and fishermen on weekends and holidays. I did have reports of nests being damaged and foot prints present inside a couple nesting areas, but did not observe any violations and most of the people I contacted on the river and just outside the roped off areas seemed to be well aware of the nesting boundaries. Most people seemed to have a fairly positive attitude toward the Tern and Plover nesting sites and the management strategies. Most people I talked with seemed to be fairly interested and asked questions about the birds.

Andy Alban: No violations. Some ATV traffic witnessed on sandbars adjacent to posted areas again. The aerial maps emailed this spring were helpful, indicating the nest sites by river mile.

Sidenote - It is helpful if the Corps identifies who is their point of contact for posting/disturbances/etc. It took a few emails this year before I knew Galen Jons was the one (instead of Ledbetter, Kruse, Daum, Pavelka). Also, I hope they aren't depending on us to monitor the T&E website. They need to contact us directly if there is a problem---and when they do, it needs to be the appropriate officer for the county the activity is in.

3. Will make arrangements with the Service and the Corps to obtain the necessary tern and plover training for law enforcement and seasonal personnel.

Accomplishments:

Three seasonal park rangers and two full time park rangers will participate in the tern and plover training in the future. Their duties during the nesting season will be expanded to watch over known nest sites on lands managed by the Parks Division. One full time park ranger and two seasonal park rangers are based out of Lewis and Clark Recreation Area and one full time park ranger and one seasonal are based out of the Pierre area. PT and MS

4. Will work cooperatively with the Corps and the Service to develop a Missouri River Management Plan for least terns, piping plovers, pallid sturgeons, and the bald eagles that establishes biological/conservation goals for South Dakota and management actions to achieve those goals. Management actions would include at least the following actions.

Accomplishments:

- SDGFP continued to use the Missouri River T&E review protocol (see Appendix B in 2002 MOA annual report) to assure environmental compliance for SDGFP development projects along the Missouri River.
- SDGFP and USFWS renewed an Assignment Agreement to allow Carol Aron, USFWS, South Dakota Ecological Services, to coordinate the development of the Missouri River endangered species management plans, which will form the basis for a Habitat Conservation Plan for the State of South Dakota. Three separate state management teams were formed to gain wide expertise for the management plans. Meeting summaries and related tasks are contained in the following appendices:
 - Missouri River Management Plan Organizing Group: Appendix B
 - Bald Eagle Management Team: Appendices C-G
 - · Least Tern and Piping Plover Management Team: Appendices I-M
 - Annual MOA Meeting: Appendix N
 - · Habitat Conservation Plan Coordination: Appendices O-P
 - Pallid Sturgeon Management Team: Appendix Q
 - Sample website text: Appendix T CA
- SDGFP has been contracted by the U.S. Army Corps of Engineers to be a partner in the long-term pallid sturgeon and associated fish community assessment for the Missouri River. Appendix R contains details.
- SDGFP again coordinated the Midwinter Bald Eagle Survey for South Dakota.
 Cumulative results through 2004 are contained in Appendix H. EDS
 - A.) On sites owned or managed by SDGFP, will close portions of the area where least terns or piping plovers are nesting, to include appropriate buffer zones.
 - B.) On sites owned or managed by SDGFP, will buoy off least tern foraging areas if potentially impacted by watercraft traffic.
 - C.) Will participate in public outreach efforts, including but not limited to placing informational posters at recreation sites, distributing informational brochures to recreation site users, random patrolling of nesting areas, and posting of nesting areas. Results of random patrolling of nesting areas will help set priorities for law enforcement follow-up.

Accomplishments:

 SDGFP Wildlife and Parks and Recreation divisions continue to distribute the "Eyeing Eagles in South Dakota" brochure and the Bald Eagle information card upon request and at state parks and recreation areas along the Missouri River.
 EDS

- SDGFP produced a variety of statewide news releases dealing with Missouri River endangered species and participated in local (Pierre area) news stories related to bald eagles (Appendix U).
- SDGFP continued to distribute the "Missouri River Species at Risk" brochure to Missouri River recreationists and via the SDGFP Wildlife Diversity Program web site.
- SDGFP Parks Division's Visitor Services accomplished the following:
 - An Eagle program was held on November 20th, 2004 at Chief White Crane Recreation Area (Mike Bryant of USFWS was the speaker). SB
 - A professionally made bald eagle costume is being used by both the Division of Parks and Recreation and the Division of Wildlife.
 - A rack card was printed and is being distributed that explains the reason for the winter closure because of bald eagle roost sites at three of the Missouri River parks. The back of the card has bald eagle facts so the public can gain a better appreciation for the eagles.
 - A set of reflective signs illustrating South Dakota endangered species was made and is being used. People will use flashlights during night walks to find and identify the endangered species on the signs hanging in the trees. LS
 - Information about the Least Tern and Piping Plover has been added to the Bird Crate that is used for education purposes. In addition, information about the Pallid Sturgeon has been added to the Fish Crate.
 - A Bald Eagle Awareness program was held at the Oahe Downstream Recreation Area informing attendants of the ecological importance of the Downstream area and how to properly view the eagles from a distance. PJB
 - D.) Will participate with signatory agencies and other interested entities in seeking solutions to site-specific threats to nesting success, such as livestock grazing.
 - E.) On sites owned or managed by SDGFP, will develop specific management strategies on sites consistently used each year by least terns and piping plovers, such as fencing or posting sites prior to arrival of nesting birds.
 - F.) Will not remove bald eagle nest trees on areas owned or managed by SDGFP, except for limited removal of single trees within campgrounds that pose a human safety hazard. Any tree removed will be replaced at a 4:1 ratio.

- A bald eagle pair spent several weeks in the vicinity of an existing nest at LaFramboise Island Nature Area during February 2004 but presumably did not lay eggs. This site will continue to be monitored for bald eagle nesting, and measures will be taken to prevent human disturbance if the pair returns to attempt nesting. EDS
 - G.) Except for limited removal of single trees within campgrounds that pose a human safety hazard, will not remove trees from documented bald eagle winter roost sites if removal could adversely affect winter roost site use at areas owned or managed by SDGFP. Any tree removed will be replaced at a 4:1 ratio.

- SDGFP operated under the tree removal procedure that was developed during 2002 (see Appendix F in 2002 MOA report).
- SDGFP Division of Parks and Recreation has developed a Bald Eagle Management Plan that details the 4:1 replacement schedule for cottonwood trees that were removed because of hazard conditions. The cottonwood trees will be cultivated in a nursery setting and shelterbelt plantings utilizing proper planting techniques, such as proper spacing between rows and individual trees, the use of fabric to retain moisture, and timely cultivation between rows to control grasses and weeds. In the spring of 2004, 100 native cottonwoods were planted in the Campground 3 area of Oahe Downstream Recreation Area. PJB and MS
- In the fall of 2004, the Oahe Downstream staff identified 5 sites for potential natural cottonwood regeneration. These sites have been evaluated by other members of the SD Bald Eagle Management Team. Our intent is to establish these areas with natural regenerated cottonwood seedlings by simulating seasonal flooding. The project will move forward if funding for pumping water to the sites is established. PJB
- Parks Division staff hand planted 125 native cottonwoods in Chief White Crane Recreation Area in 2004.
- SDGFP Parks Division District 10 continued all practices started in previous years for the North Point and Randall Creek Recreation Areas. JC
 - H.) Will continue winter recreational limits currently placed by the Corps of Engineers to protect known bald eagle roost sites, such as at Chief White Crane below Gavins Point Dam and Campground 1, 2 and 3 below the Oahe Dam at the Oahe Downstream Recreation Area, and will evaluate future restrictions on a case-by-case basis.

- The respective dates limiting winter recreation have been agreed to by all signatory agencies. Between April 1 and April 15, the SDGFP Parks Division will consult weekly with the South Dakota Natural Heritage Program staff to determine whether bald eagles are still inhabiting La Framboise Island, the campgrounds at Oahe Downstream or Chief White Crane prior to opening the campgrounds or performing maintenance duties.
- Park staff at Oahe Downstream RA reinstalled a closure gate on the loop road that provides an additional 125 yards of non-vehicular disturbance. A dispenser is located at this gated road that contains SDGFP "Eyeing Eagles in South Dakota" brochure and the Bald Eagle information card. This public information is provided to further limit public disturbance on critical winter roosting sites.
- Park staff at Randall Creek Recreation Area have placed "Eyeing Eagles" brochure in a dispenser near the closure gate to Randall Creek Campground. This information was also available to the public throughout the summer. MS
- A sign stating reasons and respective dates for campground closures has been placed on the gates leading into the campgrounds to inform the public. A sign developed for use on the hiking trails on LaFramboise Island to protect nesting bald eagles has been used as needed.

- I.) Will not construct within ¼ mile of bald eagle roost areas during the time of roost occupation.
- J.) Will not construct within ½ mile of bald eagle nests during the nesting season.
- K.) Will continue law enforcement and public outreach activities at State park and recreation areas in regard to State regulations prohibiting the take of pallid sturgeon.

 SDGFP included color pictures of both shovelnose sturgeon and pallid sturgeon in our 2004 fishing handbook, with notation that the take of both of these species is prohibited.

B. U.S. Fish and Wildlife Service (Service):

1. Will investigate all Complaints of Violation concerning take and nest disturbances at tern/plover sites and/or colonies.

Accomplishments:

 Office of Law Enforcement (LE) received complaints of human and dog disturbances on various sand bars. LE patrolled complaint areas on two weekends in June and July, 2004 and contacted people to inform them about the birds and ask them not to encroach on areas of tern/plover nesting. RP

Suggestions:

- LE will work in conjunction with SDGFP and COE in monitoring problem nesting areas prior to posting to identify/observe party responsible for destroying nests. LE made suggestions that some of the areas be signed better in the future so people know about the birds and also to make enforcement actions possible for people who then chose to ignore the signs.
- 2. Will provide law enforcement assistance commensurate with State law enforcement action where and when most needed to patrol for human disturbance at nesting least tern and piping plover colonies up to 10 potential weekend periods from Memorial Day weekend to August 15 (including the high use events such as the July 4 holiday). This would be a cooperative effort by both SDGFP and the Service providing staff on the river for the tern and plover nesting period. The details of such efforts will be worked out on an annual basis and dependent on nesting locations and active recreation areas on the river.

- LE assisted by SDGFP patrolled areas on two patrol boats during the 4th of July holiday weekend.
- On July 3rd and 4th, Lake Andes Refuge Officer patrolled the Missouri River from the Fort Randall Dam to the mouth of the Niobrara River with Corps of Engineer personnel. They searched for piping plover, least tern, and bald eagle nests along this stretch of the river. Several islands on the river had active nests of least terns and piping plovers and the riparian habitat had several active bald eagle nests. The public was informed to not enter areas with active tern and plover nests and not to disturb the eagles. Brochures about the tern and plover monitoring programs were given to the public.

 The FWS/LE boat will continue to be available for law enforcement work and is being kept in Vermillion for use also by SDGFP to patrol the river

Suggestions:

- LE will continue to provide assistance and interact with the public in active recreational areas.
- 3. Will provide law enforcement guidance and training to Corps and SDGFP personnel for proper documentation on investigation of potential violations.

Accomplishments:

- LE provided contact information and was available to provide assistance, guidance, and/or training to personnel.
- 4. Will work with SDGFP and the Corps to provide technical assistance and review the development of a Missouri River Management Plan that establishes biological/conservation goals for South Dakota and management actions to achieve those goals.

- Personnel from the USFWS Great Plains Fish and Wildlife Management Assistance
 Office in Pierre conducted pallid sturgeon activities and provided the following report:
 "Interim Report on the Capture and Monitoring of Pallid Sturgeon in the Missouri
 River between the headwaters of Lewis and Clark Lake and Fort Randall Dam (RM 825-880)" (Appendix S) DS
- Lake Andes NWF staff accomplished the following:
 - Bald eagle aerial nest surveys were conducted on the Missouri, Big Sioux, James, Niobrara, and Vermillion Rivers on March 26, March 31, and April 2, 2004. The Missouri River was flown from the Fort Randall Dam to the mouth of the Big Sioux River. The Big Sioux and Vermillion Rivers were flown from Interstate 90 to where the rivers enter the Missouri River. The James River was flown from the town of Huron to the Missouri River. The Niobrara River was flown from the Missouri River to Valentine, Nebraska. We flew each river two times, flying upstream on one side and downstream on the other side of the river. When a nest was found, the following was collected: UTM coordinates, the side of the river bank the nest was located on, and notes regarding whether the nest was occupied by an eagle or empty. We did attempt to photograph the nest, but abandoned the idea due to the difficulty in getting into position for a picture and time constraints.
 - A total of 15 active and 9 inactive bald eagle nests were found. No eagle nests were observed on the Niobrara and Vermillion Rivers. Nine active nests were monitored by the Refuge biologist during the summer to document success of the nesting attempts. Three of the nine nests were inaccessible, five nests fledged at least one young, and one was unsuccessful in fledging an eagle. The wildlife biologist put together a table in Microsoft Excel summarizing the bald eagle nesting data. A GIS map of nest locations was produced and aerial survey

- results submitted to Nebraska Game and Parks Commission, National Park Service, and SDGFP.
- The winter bald eagle surveys were conducted every two weeks along the Missouri River in southeastern portion of South Dakota. The surveys start at the Fort Randall Dam and end about 6 miles downstream at the South Dakota and Nebraska state line. The surveys were done every two weeks. The first count was done on November 25 and the last count was on March 12. The highest number of birds counted during the surveys was 83 bald eagles.
- Staff from Ecological Services Office participated in the following tasks:
 - Development of Bald Eagle, Least Tern, Piping Plover and Pallid Sturgeon Management Plans.
 SL, CB, NG
 - Coordinated with Corps of Engineers staff and SDGFP staff on proposed development activities and provided project review for projects along the Missouri River. SL, NG
 - Attended onsite meetings and provided specific recommendations for section 7 consultations with SDGFP and Bureau of Reclamation for site locations and construction of Lewis and Clark Rural Water intakes, pumphouses and pipeline placement.
 - Worked with the Corps in development and analysis of their EIS to evaluate bank stabilization impacts along free flowing sections of the Missouri River in the Dakotas and Nebraska.
 - USFWS, ES Office provided funding to undertake bald eagle nest surveys and participated in specific development of bald eagle management plans.
 DPG and CB
- USFWS, ES Offices in Bismarck and Pierre participated in section 7 consultation activities on the Corps's 2004 and 2005 Annual Operating Plans, island clearing with herbicides and mechanical treatment, bank stabilization and mechanical island creation. MO, DPG and SL
- 5. Will work cooperatively with the Corps and SDGFP to detail an experienced Service person to craft a legal process such as a Habitat Conservation Plan, or some similar process, that will allow the State to have assurances for active management and potential "take" opportunities.

Renewed an interagency agreement to provide a USFWS employee (Carol Aron) that can work full time on development of species management plans with funding provided by the State of South Dakota.
 DPG and CA

C. U.S. Army Corps of Engineers (Corps):

1. Will provide yearly survey and productivity monitoring techniques training for all seasonal and permanent employees working with least terns and piping plovers.

Accomplishments:

- Training sessions for South Dakota projects were held on May 25, 2004 at the Gavins Point Project Office and on June 1, 2004 at the Oahe Project Office. Attendees at the two sessions included fourteen Corps of Engineers, three SDGFP Department and two National Park Service personnel. (A fourth SDGFP Department employee attended the training session held at Riverdale, North Dakota on May 20, 2004.) Training included sessions on the Endangered Species Act (ESA), least tern and piping plover life histories, ESA permit conditions, monitoring techniques, data input and global positioning system (GPS) techniques.
- 2. With assistance from SDGFP seasonal employees, will conduct distribution and census surveys, and productivity monitoring on all potential nesting habitat.

Accomplishments:

- Productivity surveys for least terns and piping plovers began on the following dates for reaches in South Dakota: Lake Oahe May 2, 2004, Lake Francis Case June 28, 2004, below Fort Randall Dam May 6, 2004, Lewis & Clark Lake May 27, 2004, and below Gavins Point Dam April 27, 2004. Monitoring continued through the spring and summer and was concluded on all reaches by the end of August 2004, by which time all monitored chicks had fledged. An adult census for both species was conducted in South Dakota. The census was begun on June 21, 2004 and completed on July 2, 2004.
- 3. Will ensure near real time data availability to all signatories, including all nest locations and nest and chick status, through its web based Data Management System.

Accomplishments:

- Productivity data were collected using hand held computers and GPS equipment. After collection, these data were transferred to the Corps of Engineers' Threatened and Endangered Species Section via the Data Management System. After a quality assurance review by Corps personnel the data were made available to authorized users at the Data Management System site on the Internet. Data availability on the Internet was usually the same day as collection or the next morning. GP
- 4. With assistance from SDGFP seasonal employees, will implement nest specific management actions at all nesting sites (cages, moving nests, etc.).

- Wire mesh cages were placed over piping plover nests to deter predation. The following list shows the total number of piping plover nests at South Dakota locations and the number of nests that were caged.
 - Lake Oahe: 6 plover nests caged 6 successfully hatched, 150 plover nests not caged, 121 successfully hatched

- Fort Randall Reach: 18 plover nests caged 15 successfully hatched, 5 plover nests not caged, 1 successfully hatched
- Lewis & Clark Lake: 2 plover nests caged 0 successfully hatched, 2 plover nests not caged, 0 successfully hatched
- Gavins Point Reach: 73 plover nests caged 57 successfully hatched, 94 plover nests not caged, 45 successfully hatched
- Total: 99 plover nests caged 78 successfully hatched, 283 plover nests not caged, 167 successfully hatched
 GP
- 5. On sites owned or managed by Corps, will close portions of the area where least terns or piping plovers are nesting, to include appropriate buffer zones.

- Human deterrence measures were undertaken on several tern and plover nesting sites in South Dakota in 2004. This included the placement of various types of signs and orange twine "fencing" to delineate the boundaries of the restricted areas around the nesting sites.
- Lake Oahe: The Mobridge crew put up "Do Not Enter Endangered Species" (T&E) signs and fencing along the banks of State Line (RM 1232), Vanderlaan (RM 1225) and Blue Blanket (RM 1189). "No Trespassing" signs were put up at Swan Creek Island (RM 1173).
- Lake Oahe: The Pierre crew put up "Do Not Enter Endangered Species" (T&E) signs and fencing at Okobojo (RM 1089.5) and Cow Creek (RM 1089).
- Lake Francis Case: A small least tern colony was found near the North Point Campground (RM 881). The area was posted with T&E signs and fenced by Fort Randall Project personnel. The site was monitored by SD Game, Fish & Parks personnel to prevent North Point campers from disturbing the colony.
- Fort Randall Reach: Restriction signs and fencing were put up on sandbars at River Miles 870.0, 869.5 and 854.7.
- Gavins Point Reach: Restriction signs and fencing were put up on sandbars at River Miles 804.5, 803.4, 802.5, 801.3, 795.3, 793.6, 788.5, 781.5, 778.7, 759.2, 756.7, 755.0 and 754.5.
- 6. On sites owned or managed by Corps, will buoy off least tern foraging areas if potentially impacted by watercraft traffic.
- 7. Will work cooperatively with SDGFP and the Service to develop a Missouri River Management Plan for least terns, piping plovers, pallid sturgeons, and the bald eagles that establishes biological/conservation goals for South Dakota and management actions to achieve those goals.
- 8. Will work cooperatively with SDGFP and the Service on a Habitat Conservation plan or some similar process for State actions.

- Greg Pavelka, Bruce Vander Lee, Keith Fink, Phi Sheffield, Russ Somsen and Rod Vaughn represented the Corps of Engineers at MOA meeting sponsored by the SDGF&P that was held in Chamberlain on March 10, 2004.
- Greg Pavelka represented the Corps of Engineers for the South Dakota Tern & Plover Management Team conference call on May 13, 2004.
- Casey Kruse represented the Corps of Engineers for the South Dakota Tern & Plover Management Team conference call on July 20, 2004.
- Greg Pavelka represented the Corps of Engineers for the South Dakota Tern & Plover Management Team conference call on September 15, 2004.
- Greg Pavelka represented the Corps of Engineers for the South Dakota Tern & Plover Management Team conference call on November 8, 2004.
- 9. Will participate with the Service and SDGFP on training Corps personnel for proper documentation on investigating potential violations of State and Federal law.

Accomplishments:

At the threatened & endangered species training sessions, the personnel were instructed in documentation techniques on possible Endangered Species Act violations. T&E coordinators at the Oahe, Fort Randall and Gavins Point Projects were advised to contact USFWS special agents and the area SDGFP wildlife conservation officers to set up a working relationship for investigating possible Endangered Species Act violations.

NOTE: The Missouri National Recreational River (National Park Service) includes two stretches; a 39-mile reach from Fort Randall Dam to Running Water, South Dakota and a 59-mile reach from Gavins Point Dam to Ponca State Park, Nebraska. Missouri NRR staff accomplished a number of endangered species tasks related to this MOA. NPS has requested that the agency be added to the signatory agencies.

Missouri NRR had the following accomplishments during 2004:

- Bald Eagle
 - Helped coordinate and assist with bald eagle survey flights on the Missouri River from Ft. Randall to Sioux City, Big Sioux River (Sioux City to Sioux Falls), Vermillion River (I-90 to Missouri River), and Niobrara River (Valentine to Missouri River)
 - Paid for flight cost (Ft. Randall to Sioux City)
 - Assisted with nest/fledgling monitoring on Missouri River from Ft. Randall to Sioux City
- Least Tern, Piping Plover, and Pallid Sturgeon
 - NPS conducts weekly tern and plover surveys of the lower 15 miles of the Niobrara River (May to Sept)
- All species:

- Participated in the development of SDGFP Missouri River Management Plans
- Conducted public outreach activities such as interpretive programs, boat ramp visitor use surveys, and brochure distribution

D. All signatory agencies:

 Will participate in at least two meetings or conference calls per year, timed before the nesting season begins (to plan for the upcoming nesting season) and after the nesting season ends (to evaluate and report on success of cooperative efforts.) Other meetings or specific coordination will be scheduled as needed during the tern and plover nesting season or if other species management needs warrant an additional meeting.

Accomplishments:

- LE coordinated enforcement efforts and participated in scheduled patrol efforts with SDGFP. RP
- USFWS, Office of LE, participated in meetings prior to the nesting season and provided input for monitoring nesting areas which experience high public use.
 RP
- Met with Corps Oahe Project Office Staff, SD Department of Agriculture and County Weed and Pest Supervisors to develop and then implement protocols to allow weed control on Lake Oahe shoreline to occur while avoiding impacts to listed species, mainly to avoid tern and plover nesting areas. This involved three meetings and two joint letters.
- 2. Will participate in the identification of pallid sturgeon backwater restoration areas along the Missouri River below Gavins Point and Fort Randall Dam.
- 3. May assign special designation to areas under their authority for endangered species emphasis, as appropriate. For example, ownership of Blue Blanket Recreation Area will not transfer to SD Game, Fish and Parks on January 1, 2002. However, this area will be managed by the SDGFP Wildlife Division under a wildlife management lease agreement with the U.S. Army Corps of Engineers and will be designated as a least tern and piping plover recovery area to be managed specifically for the enhancement and recovery of nesting least terns and piping plovers.

Accomplishments:

- Agreed to maintain existing features, such as shelterbelts, with no plans to add features that might conflict with least tern and piping plover nesting success on Lake Oahe in the vicinity of Blue Blanket GPA.
- 4. Will participate in preparation of an annual accountability report, with SDGFP as lead agency for report preparation.

Accomplishments:

 All three agencies plus the Missouri National Recreational River participated in the preparation of the 2004 annual accountability report.

Report contributors:

Carol Aron (CA), USFWS, Ecological Services, Pierre, SD and SDGFP, Pierre, SD Shane Bertsch (SB), SDGFP, Parks Division, Yankton, SD Charlene Bessken (CB), USFWS, Ecological Services, Pierre, SD Pat Buscher (PJB), SDGFP, Parks Division, Fort Pierre, SD Jon Corey (JC), SDGFP, Parks Division, Lake Andes, SD Dale Gates (DG), SDGFP, Wildlife Division, Region 2, Fort Pierre, SD Natalie Gates (NG), USFWS, Ecological Services, Pierre, SD D. Pete Gober (DPG), USFWS, Ecological Services, Pierre, SD Scott Larson (SL), USFWS, Ecological Services, Pierre, SD Wayne Nelson-Stastny (WNS), SDGFP, Wildlife Division, Fort Pierre, SD Mike Olson (MO), USFWS, Ecological Services, Bismarck, ND Greg Pavelka (GP), U.S. Army Corps of Engineers, Yankton, SD Robert Prieksat (RP), USFWS, Law Enforcement, Pierre, SD Edward Rodriguez (ER), USFWS, Lake Andes NWR, Lake Andes, SD Linda Sandness (LS), SDGFP, Parks Division, Pierre, SD Dane Shuman (DS), USFWS, Great Plains FWMAO, Pierre, SD Mark Smedsrud (MSm), SDGFP, Wildlife Division, Region 3, Sioux Falls, SD Matt Snyder (MS), SDGFP, Parks Division, Pierre, SD Cliff Stone (CS), SDGFP, Wildlife Division, Chamberlain, SD Pat Thompson (PT), SDGFP, Parks Division, Pierre, SD Eileen Dowd Stukel (EDS), SDGFP, Wildlife Division, Pierre, SD Stephen Wilson (SW), NPS, Yankton, SD

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MEMORANDUM OF AGREEMENT

AMONG

SOUTH DAKOTA DEPARTMENT OF GAME, FISH AND PARKS, U.S. FISH AND WILDLIFE SERVICE, AND U.S. ARMY CORPS OF ENGINEERS

Least tern, piping plover, pallid sturgeon, and bald eagle management, protection, and recovery along the Missouri River in South Dakota

I. Purpose

The purpose of this Memorandum of Agreement (MOA) is to provide guidance and specific agency commitments for management, protection, and recovery of the least tern, piping plover, pallid sturgeon, and bald eagle along the Missouri River for the three signatory agencies, since each has a statutory responsibility for endangered species recovery. The signatory agencies agree that fulfillment of conditions contained in this MOA will help enhance annual productivity and in the long term contribute to recovery of these species.

II. Actions

It is the intent of the signatory agencies to cooperatively protect and manage nesting populations of the least tern and piping plover along the Missouri River in South Dakota through monitoring, site protection, law enforcement, and public outreach. It is also the intent of the signatory agencies to protect bald eagle nesting sites and important winter roost sites along the Missouri River in South Dakota. Additionally, signatory authorities will commit to protect pallid sturgeon and their habitat by minimizing threats from existing and proposed human activities, law enforcement and public outreach.

A. South Dakota Department of Game, Fish and Parks (SDGFP):

- Will hire at least three seasonal employees each nesting season to be stationed where most needed to assist the U.S. Army Corps of Engineers (Corps) in monitoring and protecting least tern and piping plover nesting areas.
- 2. Will provide law enforcement assistance where and when most needed to patrol for human disturbance at least tern and piping plover nesting colonies up to 10 potential weekend periods from Memorial Day weekend to August 15 (including the high use events such as the July 4 holiday). This would be a cooperative effort by both SDGFP and the U.S. Fish and Wildlife Service (Service) providing staff on the river for the tern and plover nesting period. The details of such efforts will be worked out on an annual basis and dependent on nesting locations

- and active recreation areas on the river.
- 3. Will make arrangements with the Service and the Corps to obtain the necessary tern and plover training for law enforcement and seasonal personnel.
- 4. Will work cooperatively with the Corps and the Service to develop a Missouri River Management Plan for least terns, piping plovers, pallid sturgeons, and the bald eagles that establishes biological/conservation goals for South Dakota and management actions to achieve those goals. Management actions would include at least the following actions.
 - A.) On sites owned or managed by SDGFP, will close portions of the area where least terns or piping plovers are nesting, to include appropriate buffer zones.
 - B.) On sites owned or managed by SDGFP, will buoy off least tern foraging areas if potentially impacted by watercraft traffic.
 - C.) Will participate in public outreach efforts, including but not limited to placing informational posters at recreation sites, distributing informational brochures to recreation site users, random patrolling of nesting areas, and posting of nesting areas. Results of random patrolling of nesting areas will help set priorities for law enforcement follow-up.
 - D.) Will participate with signatory agencies and other interested entities in seeking solutions to site-specific threats to nesting success, such as livestock grazing.
 - E.) On sites owned or managed by SDGFP, will develop specific management strategies on sites consistently used each year by least terns and piping plovers, such as fencing or posting sites prior to arrival of nesting birds.
 - F.) Will not remove bald eagle nest trees on areas owned or managed by SDGFP, except for limited removal of single trees within campgrounds that pose a human safety hazard. Any tree removed will be replaced at a 4:1 ratio.
 - G.) Except for limited removal of single trees within campgrounds that pose a human safety hazard, will not remove trees from documented bald eagle winter roost sites if removal could adversely affect winter roost site use at areas owned or managed by SDGFP. Any tree removed will be replaced at a 4:1 ratio.
 - H.) Will continue winter recreational limits currently placed by the Corps of Engineers to protect known bald eagle roost sites, such as at Chief White Crane below Gavins Point Dam and Campground No. 3 below the Oahe Dam, and will evaluate future restrictions on a case-by-case basis.
 - I.) Will not construct within ¼ mile of bald eagle roost areas during the time of roost occupation.
 - J.) Will not construct within ½ mile of bald eagle nests during the nesting season.

K.) Will continue law enforcement and public outreach activities at State park and recreation areas in regard to State regulations prohibiting the take of pallid sturgeon.

B. U.S. Fish and Wildlife Service (Service):

- 1. Will investigate all Complaints of Violation concerning take and nest disturbances at tern/plover sites and/or colonies.
- 2. Will provide law enforcement assistance commensurate with State law enforcement action where and when most needed to patrol for human disturbance at nesting least tern and piping plover colonies up to 10 potential weekend periods from Memorial Day weekend to August 15 (including the high use events such as the July 4 holiday). This would be a cooperative effort by both SDGFP and the Service providing staff on the river for the tern and plover nesting period. The details of such efforts will be worked out on an annual basis and dependent on nesting locations and active recreation areas on the river.
- 3. Will provide law enforcement guidance and training to Corps and SDGFP personnel for proper documentation on investigation of potential violations.
- 4. Will work with SDGFP and the Corps to provide technical assistance and review the development of a Missouri River Management Plan that establishes biological/conservation goals for South Dakota and management actions to achieve those goals.
- 5. Will work cooperatively with the Corps and SDGFP to detail an experienced Service person to craft a legal process such as a Habitat Conservation Plan, or some similar process, that will allow the State to have assurances for active management and potential "take" opportunities.

C. U.S. Army Corps of Engineers (Corps):

- 1. Will provide yearly survey and productivity monitoring techniques training for all seasonal and permanent employees working with least terns and piping plovers.
- 2. With assistance from SDGFP seasonal employees, will conduct distribution and census surveys, and productivity monitoring on all potential nesting habitat.
- 3. Will ensure near real time data availability to all signatories, including all nest locations and nest and chick status, through its web based Data Management System.
- 4. With assistance from SDGFP seasonal employees, will implement nest specific management actions at all nesting sites (cages, moving nests, etc.).
- 5. On sites owned or managed by Corps, will close portions of the area where least terns or piping plovers are nesting, to include appropriate buffer zones.
- 6. On sites owned or managed by Corps, will buoy off least tern foraging areas if potentially impacted by watercraft traffic.
- 7. Will work cooperatively with SDGFP and the Service to develop a Missouri River Management Plan for least terns, piping plovers, pallid sturgeons, and the bald

- eagles that establishes biological/conservation goals for South Dakota and management actions to achieve those goals.
- 8. Will work cooperatively with SDGFP and the Service on a Habitat Conservation plan or some similar process for State actions.
- 9. Will participate with the Service and SDGFP on training Corps personnel for proper documentation on investigating potential violations of State and Federal law.

D. All signatory agencies:

- 1. Will participate in at least two meetings or conference calls per year, timed before the nesting season begins (to plan for the upcoming nesting season) and after the nesting season ends (to evaluate and report on success of cooperative efforts.) Other meetings or specific coordination will be scheduled as needed during the tern and plover nesting season or if other species management needs warrant an additional meeting.
- 2. Will participate in the identification of pallid sturgeon backwater restoration areas along the Missouri River below Gavins Point and Fort Randall Dam.
- 3. May assign special designation to areas under their authority for endangered species emphasis, as appropriate. For example, ownership of Blue Blanket Recreation Area will not transfer to SD Game, Fish and Parks on January 1, 2002. However, this area will be managed by the SDGFP Wildlife Division under a wildlife management lease agreement with the U.S. Army Corps of Engineers and will be designated as a least tern and piping plover recovery area to be managed specifically for the enhancement and recovery of nesting least terns and piping plovers.
- 4. Will participate in preparation of an annual accountability report, with SDGFP as lead agency for report preparation.

III. Principal Contacts

- 1. U.S. Fish and Wildlife Service Ralph O. Morgenweck PO Box 25486 DFC Denver, CO 80225 (303) 236-7920 (303) 236-8295 (fax) ralph_morgenweck@fws.gov
- 2. SD Dept. of Game, Fish and Parks John L. Cooper 523 E. Capitol Ave. Pierre, SD 57501 (605) 773-4229 (605) 773-6245 john.cooper@state.sd.us

IV. Agreement Term

V. Approval

We, the undersigned designated officials, do hereby approve this Memorandum of Agreement.		
Approved	John L. Cooper Secretary SD Dept. of Game, Fish and Parks	Date 10/29/01
	Relph Morgenweck Regional Director, Region 6 US Fish and Wildlife Service	Date 0 26 01
for	Kurt F. Ubbelonds Colonel, Corps of Engineers District Engineer	Date 11/6/01

Appendix B - Meeting Minutes of Missouri River Management Plan Organizing Group – February 17, 2004

Participants: Eileen Dowd Stukel

Scott Larson Natalie Gates Charlene Bessken

Carol Aron

Larry Gigliotti (for a public outreach discussion for part of the meeting)

Subject: Cooper-Blankenship MOA meeting, Tern & Plover Meeting, Eagle Monitoring

Next Meeting: March 18, 2004, 10:00 AM

Small Conference Room (2nd Floor, Joe Foss Building)

Cooper-Blankenship MOA meeting:

The attendees list for the March 10 meeting about the MOA was discussed. Scott noted that Mike Bryant would attend. Eileen recommended that I contact Bob Schneider, the Regional Parks Manager and see if he would attend (Note: I spoke with him & he will attend). She also recommended that I ask Bob Schneider and Matt Snyder if the regional park managers along the Missouri (Pat Buscher, Pat Thompson, Jeff Van Meeteren, Jon Corey, and Jerry Gray) should be invited. The invite list is as follows:

FWS	Blankenship	
	Mike Olson	
	Pierre Office People	
	-Pete, Scott, Charlene, Natalie	
	Steve Krentz, Wayne Stancill	
	Bob Prieksat, Mike Bryant	
GFP	Cooper	
	Eileen Dowd Stukel, Jim Riis, Wayne	
	Nelson-Stastny, Doug Backlund	
	Matt Snyder & Bob Schneider (Regional	
	Parks Manager)	
	Emmett Keyser, George Vandel, Cliff	
	Stone, Arden Peterson, Dale Gates, Marty	
	Pennock	
Other	myself	
Corps	Casey Kruse, + Lake Managers	

The group discussed the agenda for the meeting & reorganized/refocused it so that the MOA will be the main point of discussion. See attached agenda. Please review & get any comments back to me by Friday, February 20.

Terns & Plovers:

The tern and plover team has been selected and contacted to officially designate them as team members. The group held a discussion of the auxiliary groups that have been contacted to inform them that there is a team and to ask if they would like to continue to receive information. We discussed what to do about groups that want to attend meetings but may have a different agenda than the one we have designated for the Least Tern & Piping Plover Team, viz. South Dakota's role in recovery. We brought Larry Gigliotti in to discuss this issue.

Larry suggested that we state clearly that the tern & plover team is a technical group, and that meeting notes will be provided to the general public. We pointed out that the meetings are open; anyone can attend (although they are not advertised to the wider public). Larry suggested that if others want to attend, they sit aside and not participate. I asked about conference calls. Larry said that he did not think it would be appropriate for them to phone in. However, we want to make sure to include them as much as possible, and to encourage them to get onto the mailing list and use the website. Via the website, any group can give feedback. At some point, we may want to hold public forums.

We briefly discussed the Agenda. See updated version (attached). Please provide any feedback on the Agenda by Monday, February 23.

We asked if Larry would be able to be a facilitator at the meeting. He said that he would look at his calendar and get back to us.

Bald Eagles:

The group agreed that the news release should go out to the general public at the beginning of March. Eileen recommended that we also ask Cooper to sign off on a GFP memo asking for staff assistance with the bald eagle nest survey that will go out in the first week of March.

The group recommended that I ask the Bald Eagle Team specifically what criteria we should measure in the winter-roost survey this summer. Natalie noted that patch size of forest should be measured.

Eileen asked if we could note colonial bird nesting colony locations on the bald eagle nest flights. I said I would contact Jay. (Note: I asked Jay about this, he said that's fine, he will add it to the flight plans.)

We discussed the Bald Eagle Nest Monitoring Protocol. The group suggested that I simplify the format by making clearer which visits are less important. (Attached).

Appendix C – First meeting report for SD Bald Eagle Management Team – February 5, 2004

Meeting Minutes: Bald Eagle Team Meeting

Date: February 5, 2004

Attendees: Carol Aron, Doug Backlund, Pat Buscher, John Dinan, Eileen Dowd Stukel, Natalie Gates, Charlene Bessken, Wally Jobman, Carter Johnson, Vickie Kujawa, Scott Larson (FWS), Matt Lewis, Dan McCormick (SDGFP), Kristine Nemec, Jay Peterson, Lisa Peterson, Alvah Quinn, Steve Wilson

Subjects: Winter Roost Inventory

Criteria for Success Aerial Nest Surveys

Reminders & Requests:

- 1. Next Meeting, Thursday, April 8, 10:00 AM (Central Time) Conference Call, Dial 1-877-915-2769, Passcode: 30949, Leader: Carol Aron. Agenda etc. will be sent out closer to the date.
- 2. By February 19, team members should give me (<u>carol.aron@state.sd.us</u>, 605-773-2745) ideas about parameters to measure for winter roost forest surveys.
- 3. Jay would appreciate any information about possible locations of eagle nests on reservations (or elsewhere) so that we can look for them on the flight surveys.

 (Jay Peterson@fws.gov, 605-885-6320)
- 4. Please send Doug (doug.backlund@state.sd.us) or myself information about wintering eagle numbers, especially in locations that you count repeatedly throughout the winter.

Winter Roost Forest Inventory:

SD Game, Fish & Parks (SDGFP) is planning to sample potential bald eagle winter roost areas this summer. We are evaluating sampling now. Areas targeted for sampling this summer are the areas below the dams on the Missouri (Oahe Dam, Big Bend Dam, Fort Randall Dam, Gavins Point Dam) and below Angostura Dam where eagles are known to congregate during cold weather.

Dan McCormick (SDGFP) gave a summary of a forest inventory he had done in 1988 of the Oahe downstream area. The Corps had initiated that study to look at the change in forest composition since dam closure. They believed that cottonwood and willow were not regenerating, but had no supporting data. The purpose of the study was to determine:

- a) species composition
- b) tree size

- c) tree condition and
- d) succession what species were coming in.

The sampling method used was a fixed plot inventory, whereby the entire area was gridded, and plots were randomly selected within the grid. On average, there was one plot every 6 acres. (I will send everyone a copy of the write-up so that you can study the details in depth at your leisure.) The entire study took six people about three days. Among other things, the study verified that cottonwood regeneration was not occurring.

Carter pointed out that there are faster methods to determine forest composition that may provide the same information as the 1988 study. To choose the best survey method, the team needs to decide what criteria need to be measured regarding bald eagle winter roosts. Carter, Dave Ode, and Dan McCormick will then determine what survey method would best accomplish the sampling goals. Some parameters that should be measured include: tree species, height, diameter, condition, and density. Please let me know of other criteria that should be included to determine present and future utility for bald eagles.

Scott suggested that there may be other areas bald eagles are using in the winter that we are not yet aware of and wondered if we should wait to begin surveys until we know more locations of winter roosting areas. The team agreed that while there probably are more winter roosting areas, it would be worthwhile to begin surveying the ones that we are aware of now, especially those on state or federal land since the state will be able to actively manage those. Eagles also use islands, but this appears to be predominantly for daytime perching, so it was agreed that it would not be necessary to survey islands.

Dave asked Alvah whether there were winter congregations below the Big Stone Powerplant. Alvah will look into that.

Remote Sampling of Cottonwoods:

Steve talked about his use of the 1992 National Land Cover data to remotely determine the amount of cottonwood along the Missouri in South Dakota. He looked at other GIS data for the entire state (e.g. GAP data, Corps data), but determined that the National Land Cover Data was the most accurate data available at this time. Aerial photographs provide more detail of specific areas along the river, but they are not available for the Missouri throughout the state. Steve's analysis will give a rough estimate of the amount of cottonwood remaining along the Missouri for all of South Dakota. Since this dataset only has a "deciduous" rather than "cottonwood" category, the results will be an overestimate of the acres of cottonwood along the river. Even with these caveats, the data should be very useful in helping us determine existing conditions, and it is the only

source we have at the moment to look at Missouri River habitat throughout South Dakota.

Midwinter Bald Eagle Survey:

Eileen described South Dakota's part in the Midwinter Bald Eagle Survey. There are four standardized routes, which are flown every year in January. Bald eagle numbers vary widely between years, so only long-term trends are really meaningful. The numbers were down this year (140 compared with 218 last year - see attached document).

A discussion ensued about eagle numbers increasing later in the winter when more water has frozen so that the tailrace areas are the only open water available. Jay, Pat, John, and Doug all noted that the overall number of eagles in roosting sites tends to increase later in the winter (87 eagles were seen below Oahe Dam last night, compared with only 21 sited during the Midwinter survey), while the number of juveniles decreases. Juveniles may migrate before adults, and leave South Dakota when it gets cold. Since the numbers of bald eagles in South Dakota seem to rise throughout the winter, I would appreciate reports of eagle numbers as you get them.

Aerial Nest Surveys:

Jay described the aerial surveys that he conducted in 1998 and 2000 to look for bald eagle nests. He flew along all of the major rivers in the state as long as there was appropriate habitat for nests. Nests were photographed and their location identified with a GPS unit. Two observers (often including the pilot) scanned from either side of the plane. Jay is interested in increasing the number of surveyors to fly for bald eagle nests. If you are interested in participating, contact Jay. (Note: a low-altitude aviation training is required for FWS employees. Whether or not it is required for everyone else is hazy at this point, I am asking around & will let you know by next week. The course will probably be scheduled late February, tentatively February 25 in Huron, SD. If you are interested in participating, you should try to attend.)

This year, we are planning to repeat the aerial survey along the major rivers as well as flying transects in the eastern part of the state to try to find bald eagle nests in shelterbelts. We have been getting increasing numbers of reports of bald eagles in trees away from water, and would like to locate those nests. The surveys will begin mid-March, when the nest "owners" are more likely to be nearby, allowing observers to verify that the nests belong to bald eagles, as opposed to some other raptor.

John said that in Nebraska they have been finding nests away from major water sources, but the nests are still near wetlands or ponds. He conceded that they have not surveyed in areas away from major water sources so there may be nests in non-typical locations that they do not know about. Alvah and Jay both noted that eagles often nest in dead or partly dead trees in shelterbelts. Many cottonwoods were killed in the 1997 floods, and these trees are now dying and falling over. Hopefully, the eagles have built secondary nests, which they can use.

Jay noted that nest trees typically are at least partially dead, perhaps to allow the birds enough space to fly to and from the nest, and South Dakota nests tend to be in the upper part of the tree. Jay thinks nests could be anywhere in South Dakota; he commented that outside the Missouri River area, the distance of bald eagle nests to water does not seem to matter. Eagles away from large water bodies may still be flying to water to feed on fish and waterfowl, or they may have found an alternate food source. Jay noted one report of eagles flying to a pig operation to eat piglets that a farmer was spreading onto a field. Eagles have also been known to perch near prairie dog towns, although nearby nests have not been found.

Follow-up Monitoring:

After a nest is located, it should be checked from the ground to determine success. John and Jay have both developed follow-up forms for observers to fill out. Jay recommends only one ground visit mid-way through June when the young should be large enough to see from the ground, but before they have fledged. Even after fledging, they tend to stay near the nest for some time and could be identified. John said that in Nebraska, they recommend two visits, one early in the season (April?) to determine that there is an adult pair in attendance, and one prior to fledging. John thinks that it is important to check the nest before fledging because they are much more difficult to locate after they have fledged. In Nebraska, there are six district offices, with one person in each office responsible for organizing the ground surveys. We will develop a form for this year's monitoring.

Website Comments:

Lisa expressed concern that the website might give out specific information about nest location. I said that I was planning on putting up the state map that I had given the team at the first meeting with the nests marked on the map. The scale of this map too big for someone to locate a nest to more than a general location. Specific nest locations will not be given out (with the obvious exception of providing the information to the person who will be checking the nest from the ground).

Next Meeting:

The next meeting will be on Thursday, April 8 at 10:00 Central Time. Dial 1-877-915-2769, Passcode: 30949, Leader: Carol Aron

We will discuss habitat surveying methodology. Please get ideas about parameters that should be measured to me by February 19.

Lisa asked if Gene O'Neil, a Corps employee who is looking at the forest community along the Missouri could "attend" the next meeting. The team agreed.

Note: Charlene Bessken of the Pierre FWS office will be replacing Natalie Gates. I will attach an updated team list

Team Contact Information

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Mr. Doug Backlund

South Dakota Game Fish & Parks

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E-mail: Doug.Backlund@state.sd.us

Ms. Charlene Bessken US Fish and Wildlife Service 420 S. Garfield Avenue, Suite 400

Pierre, SD 57501

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E-mail: sheldonselwyn@hotmail.com

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E-mail: Stephen_K_Wilson@nps.gov

Advisory Role: Mr. John Dinan Nebraska Game and Parks Commission PO Box 30370 Lincoln, NE 68503 Phone: 402-471-5440

E-mail: jdinan@ngpc.state.ne.us

Phone: 605-964-7812

E-mail: crwildlife@lakotanetwork.com

Appendix D – Second meeting report for SD Bald Eagle Management Team - April 8, 2004

Meeting Minutes: Bald Eagle Team Meeting, Conference Call

Date: April 8, 2004

Attendees: Carol Aron, Doug Backlund, Charlene Bessken, Pat Buscher, Eileen Dowd Stukel, Carter Johnson, Dan McCormick (SDGFP), Kristine Nemec, Dave Ode (SDGFP), Jean O'Neil (USACE-Vicksburg), Jay Peterson, Lisa Peterson,

Alvah Quinn,

Subjects: Update on on-going aerial nest surveys

Update on plans for forest surveys

Bald Eagle Aerial Nest Monitoring:

Monitoring is ongoing. The entire James has been flown, the Vermillion and Big Sioux south of I-90, the Missouri from Fort Randall to Sioux City, the Cheyenne, Belle Fourche, and a transect area in Brown County (approx. 360 sq. miles). In addition to finishing up the major rivers, there will be more transect flights in the Waubay area. The findings have not yet been compiled. Several known nests have been confirmed from the air; some that were missed in the aerial surveys have been found from the ground. We do not yet have information about new nests that have been found.

Alvah reported that the Sisseton Wahpeton flew on February 12 and found three nests. They will be monitoring those from the ground to determine success. Alvah will send out a report shortly to Pete Gober (USFWS-Pierre) and Carol. He will also coordinate with Jay. When the Waubay people fly their transect, they may fly over those nests to determine if they are active.

The public outreach effort seems to be working well. Doug and Carol have gotten several calls from various reporters and USFWS and SDGFP have gotten numerous calls from the public about reported eagle nests.

Forest Inventory

Dave, Dan & Carter developed a draft plan for surveying forest areas along the Missouri (attached). Carol asked for comments/suggestions about the protocol. We had initially discussed only sampling in the known winter roost sites directly below the dams. SDGFP decided to include all lands currently managed by SDGFP along the Missouri.

Jean O'Neil said that the Corps is working on determining condition on a five-mile stretch of river using remote sensing. She said that in their aerial photographs, you could see broken branches and suggested that the "overmature" category be further broken down to include information about whether or not the trees have broken branches. She also suggested that the survey include information about height or a height/DBH ratio. There is some evidence in other species that stressed stems may have a lower DBH relative to height.

Dave noted that in young stands the stems are very dense. They prune themselves over time, so the height/DBH ratio may not be very informative.

Carter said that height would take a lot of time to measure and was it was not clear that we would get information pertinent to bald eagles. The team agreed not to measure height due to the time and expense involved and limited utility.

The forest blocks will be delineated on a map and ideally forest blocks will be broken down by type. The contractor will GPS the start and finish of each transect line. Carter does not think it necessary to GPS each sample point. He think there will be between 3-6 transects per stand. If and when SDGFP re-samples at a later date, it would not be necessary to sample at exactly the same points.

Jay suggested that we also note general stand information. For example, some areas have a lot of beaver damage, and some have streambank erosion causing trees to fall down.

Dave said that he would add a section for stand characteristics such as beaver damage or erosion, including an estimate of overall stand height (i.e. average 30 m, 40 m etc.).

Carter noted that bank retreat could be measured from a series of aerial photographs.

Dave, Dan & Carter will develop a check-list of items the contractor can use.

Appendix E – Third meeting report for SD Bald Eagle Management Team – September 14, 2004

Meeting Minutes: Bald Eagle Team Meeting, Conference Call

Date: September 14, 2004

Attendees: Carol Aron, Charlene Bessken, Pat Buscher, Wally Jobman, Lisa Peterson,

Sheldon Selwyn

Subjects: Start developing nesting and roosting goals. Discussion of cottonwood

planting.

Next Meeting: November 10, 2004

Nest Monitoring:

The group thought that the information about location and status of active bald eagle nests was important enough that it would be worth monitoring annually. Carol said that while she plans to keep an ear out regarding new nests continually and track information as it come in, she had not planned on doing that level of monitoring every year. Certainly she didn't think that it would be worth flying again every year, although flying is a good way to determine early season bald eagle nest use. The group thought that we should monitor nests every year, with perhaps a more active approach to finding new nests occurring every second year, and flights every 2-4 years. Steve Wilson (who had called to give input prior to the meeting) said that he thought that the flying provided good information relatively cheaply, and was worth repeating every few years (not necessarily annually). The Park Service would be willing to pay for monitoring from Fort Randall to Sioux City, including the Niobrara. The group agreed that monitoring should continue for a minimum of 10 years post delisting. The Service has apparently not developed a post-delisting monitoring plan, but when they do, we might consider following theirs.

Nesting Goals:

The participants agreed that habitat goals would probably be better than numerical goals since we can't control whether the eagles show up or not. However, we were concerned that without tying the goal to eagle use, we wouldn't know whether there was actually appropriate habitat. The group agreed that it would be good to keep the current restrictions on not cutting down any current or potential bald eagle nest or roost trees on public land except in hazardous situations and replanting cottonwoods that are removed along the river at a 4:1 ratio. We tentatively set a goal of 25 active nests in the state averaged over a 5-year period.

Cottonwood Planting

The planting thus far has not been that successful. Pat estimates that only about 20% of the 500 or so cottonwood seedlings that they planted in the Oahe downstream area have survived. They did not water the trees, and many of the trees likely died because of the drought. The clayey soils in some areas where they planted were also likely not conducive to cottonwood growth. They are now experimenting with planting larger trees right in the campground areas. Pat would like to try some experiments involving scarifying the soils and watering at appropriate times to see if that would induce natural regeneration. He noted that there is a lot of cottonwood regeneration along the reservoir edges since the water is so low, but these seedlings/saplings will die when the water eventually rises. Lisa said that if we can identify specific areas to plant/allow regeneration, the Corps may pay to pump water in those areas. Cottonwoods roots can grow up (down) to one meter a year, so trees may only need to be watered for a few years until their roots reach the groundwater. The Corps would probably be more supportive/more willing to pay if we can identify specific areas. Pat and Dan McCormick will work on locating potential sites around Oahe Dam.

The team discussed planting other native species in areas where we do not think that cottonwood will survive due to soils, lack of water, etc. The team was concerned that bald eagles might not use other tree species, although they do seem to use any large tree with the correct morphology. The general consensus seemed to be that it would be worth trying to water cottonwood plantings before we start planting other species. Perhaps the option to plant other species could be included as a possible adaptive management technique. The National Park Service would probably not support planting tree species other than cottonwoods along the stretches of river that they manage.

It would be nice to get more information about cottonwood planting and regeneration success. Carol will talk to Carter about getting a student cottonwood project going.

Winter Roosts

We know of a roost below Oahe Dam, and at Chief White Crane. Pat says that from his observations, they follow the geese until the weather gets really bad, when they congregate below Oahe Dam (in this area). In milder weather, they congregate in Peoria Flats, Okobojo, and Carol has a report of 30+ bald eagles in the White River confluence. The areas that they use in milder weather are so general and varied that it would be hard to place restrictions on them. It is difficult to identify the winter roosts that they use in bad weather because they go there shortly before sunset and leave right after sunrise. Possibly local birders could be encouraged to note and report winter

roosts. Wally said that in Nebraska, they require applicants whose projects impact mature cottonwoods to survey for eagles in winter before the project goes forward.

Appendix F – Fourth meeting report for SD Bald Eagle Management Team – November 10, 2004

Meeting Minutes: Bald Eagle Team Meeting, Conference Call

Date: November 10, 2004

Attendees: Carol Aron, Doug Backlund, Charlene Bessken, Eileen Dowd Stukel, Carter

Johnson, Josh Kiesow, Kristine Nemec, Alvah Quinn, Steve Wilson

Subjects: Cottonwood planting goals. Next Meeting: January 25, 2005

Cottonwood Study:

We have about \$33.5 K available for a graduate project to look at cottonwoods, but we need at least \$36 K for a two-year stipend plus money for travel, planting etc. We will work up a budget to present to the Corps to see if they can provide some funding to help with this project. This graduate project fits in well with the pilot project looking at cottonwood regeneration success we have been discussing. Carter knows of a student who may be interested in starting in January.

The group seemed to be in general agreement that having a "no-net loss" goal for the existing roost sites is generally a good one. Carter pointed out that the area to be included will need to be larger than the existing area so that we can plant some trees now in unforested areas. Tree planting can also be accomplished by infilling in areas where trees come down. It is somewhat difficult to predict the time remaining for the existing forest since single events (i.e. a windstorm) likely will cause the loss of a large number of trees at once. Once established, cottonwoods tend to survive for a long period (70+ years) and then degenerate rapidly.

Carter suggested looking at some larger increment - i.e. ten-years, and mapping out how many we will lose in that time. We could then plan to plant to compensate for those expected losses. Study of how long is left for existing cottonwoods in bald eagle winter roost areas could be incorporated into the graduate project as well as specific management actions to prolong the usefulness of existing roost areas.

Since cottonwood plantings have been so unsuccessful in many areas to date, Carol wondered if we should look at planting other species if we do not find a way to grow cottonwoods successfully in the future. The consensus was that it is important to find a way to make sure that cottonwoods are successful. There are no other tree species that grow well in this area that are likely to be large enough to be used by bald eagles.

Bald Eagle Nests:

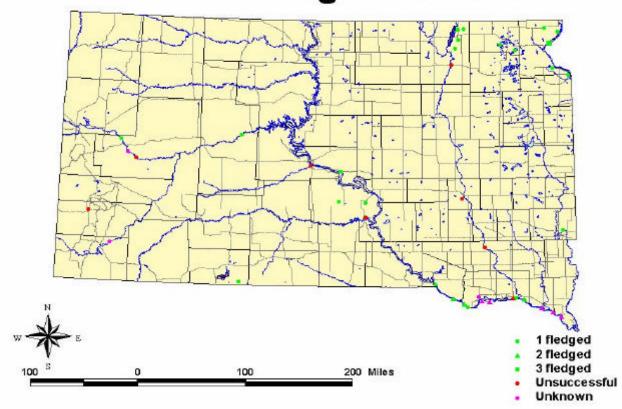
The team agreed that 25 active nests per year on a 5-year running average is a reasonable goal.

Alvah Quinn said that the Sisseton-Wahpeton Sioux Tribe got a grant from the USFWS to do aerial surveys for bald eagles. They have already located a nest in the Drywood Lake area. In the 1996-1997 floods, a lot of cottonwoods were killed, and this area is apparently now really prime for bald eagles. He will send the report once it is completed.

More items to include in the plan:

Carol will be coming out with a draft plan before the next meeting. She would appreciate any thoughts of other items to include. Carter noted that while we've been talking about planting cottonwoods by hand in small distinct locations, the best all around would really be a change in the flow regime leading to natural regeneration. The 1996-1997 floods caused erosion and deposition, and cottonwoods are regenerating in those deposition areas. With some tweaking of the flows, we may be able to promote more natural regeneration. The plan will incorporate a statement that we recommend "natural" flows at the best course of action, with planting etc. necessary because of the lack of flows.

SD Bald Eagle Nests 2004



Bald Eagle Nest Survey 2004

NEST SURVEY RESULTS:

South Dakota Only

Active nests = 30

Successful = 20

- 7 nests = 1 fledgling
- 12 nests = 2 fledglings
- 1 nest = 3 fledglings

Total = 34 fledglings (1.7 fledglings/successful nest, 1.26 fledglings/nest with known outcome)

Unsuccessful = 7

Unknown = 3

South Dakota and bordering (NE & MN)

Active nests = 40

Successful = 24

- 9 nests = 1 fledgling
- 14 nests = 2 fledglings
- 1 nest = 3 fledglings

Total = 40 fledglings (1.67 fledglings/successful nest, 1.25 fledglings/nest with known outcome)

Unsuccessful = 8

Unknown = 8

Definitions:

Active = evidence of use at some time during the season (nesting material and/or eggs in the nest, or eagles on or near the nest)

Successful = fledged at least one young

Unsuccessful = active early season, but didn't fledge young

Unknown = Active early season but couldn't find nest again

Appendix H - Midwinter Bald Eagle Survey Results

	Lake Oahe							Lake	Sharpe	
Year	Bald eagles			Golden & unknown eagles	Bald eagles				Golden & unknown eagles	
	Adult	Imm	Unk	Total	Total	Adult	lmm	Unk	Total	Total
1986	2	3	0	5		47	7	0	54	13
1987	5	1	0	6	0	88	0	0	88	11
1988	6	4	0	10	0	52	8	0	60	8
1989	3	6	0	9	3	86	18	0	104	17
1990	16	1	0	17	1	129	11	3	143	5
1991	10	9	0	19		32	18	0	50	
1992						5	4	0	9	0
1993						49	0	0	49	18
1994	1	0	0	1	2	51	27	0	78	3
1995	0	1	0	1	1	85		0	98	5
1996	6	2	0	8	1	89	13	0	102	12
1997	1	0	0	1	1	40	0	0	40	10
1998	3	1	0	4	3	34	5	0	39	4
1999	0	0	0	0	2	41	6	0	47	9
2000	1	0	0	1	1	12	4	0	16	3
2001	3	0	1	4	7	1	1	0	2	4
2002	1	1	0	2	5	20	1	0	21	10
2003**	5	3	0	8	10	12		0	21	8
2004	1	0	0	1	5	12	3	6	21	0

	Lake Francis Case					Lo	ower Mis	souri Riv	er	
Year	Bald eagles			Golden & unknown eagles	Bald eagles				Golden & unknown eagles	
	Adult	Imm	Unk	Total	Total	Adult	Imm	Unk	Total	Total
1986	6	1	0	7	14					
1987	54	5	2	61	0					
1988	19	23	0	42	1					
1989	43	8	3	54	4	31	16	0	47	1
1990	2	0	0	2	0	26	5	0	31	0
1991	0	0	0	0						
1992	1	0	0	1	0	80	22	0	102	8
1993						5	4	0	9	1
1994	0	2	0	2	1	174	41	0	215	0
1995	0	0	0	0	2	123	0	0	123	12
1996	2	1	0	3	1	65	19	0	84	0
1997	7	1	0	8	1	88	27	0	115	5
1998	93	23	0	116	9	106	62	0	168	0
1999	7	4	0	11	2	143	90	2	235	0
2000	15	6	0	21	4	85	71	0	156	0
2001	2	1	0	3	1	53	68	0	121	0
2002	20	10	0	30	4	132	49	0	181	0
2003**	18	4	0	22	14	123	39	5	167	3
2004	16	3	2	21	12	75	22	0	97	0

Totals					
Year		Golden & unknown eagles			
	Adult	lmm.	Unk.	Total	Total
1986	55	11	0	66	25
1987	147	6	2	155	11
1988	77	35	0	112	9
1989	163	48	3	214	25
1990	173	17	3	193	6
1991	42	27	0	69	0
1992	86	26	0	112	8
1993	54	4	0	58	19
1994	226	70	0	296	6
1995	208	14	0	222	20
1996	173	34	0	207	22
1997	136	28	0	164	17
1998	236	91	0	327	16
1999	191	100	2	293	13
2000	113	81	0	194	8
2001	59	70	1	130	12
2002	173	61	0	234	19
2003*	158	55	5	218	35
2004	104	28	8	140	17

^{*} portion of route 4 was not covered between Running Water and Gavins Point Dam

Appendix I – First meeting report of SD Least Tern and Piping Plover Management Team – March 16, 2004

South Dakota Least Tern & Piping Plover Management Team

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March 16, 2004, Joe Foss Building: Pierre, SD

Next Meeting: Conference Call, May 13, 10:00 AM

Attendees:

Carol Aron, FWS/SDGFP SD
Pat Buscher, SDGFP
Eileen Dowd Stukel, SDGFP
Natalie Gates, FWS SD
*Karen Kreil, FWS ND
Mathew Lewis, Lower Brule
Rich Madson, FWS, SD (Private Lands)
Joanna Murray, Cheyenne River Sioux
Greg Pavelka, USACE
Sheldon Selwyn, Yankton Sioux Tribe
*Erika Wilson, FWS NE
Steve Wilson, NPS

Miscellaneous issues to get to Carol:

Team:

* Teleconference

- 1. Further information we need to develop biologically based goals.
- 2. Review list of groups/individuals who will be updated and add any you think would be interested in updates.

Steve: Addition of the Park Service to the MOA. Discuss with supervisor. Greg /Pat /Joanna (and other river tribes): Develop system for Corps field crews to inform Parks' staff about beach closures and fencing.

Greg: Photographs of fencing for the web. Also, if you have pictures of terns & plovers that I could put on the web, I would appreciate that. Let me know whom to credit.

Greg: Maps of nest sites.

Karen: The draft 2001 plover recovery plan.

Erika: Historic information about least tern populations (Do you have it in an

electronic format?).

Carol: Information about island succession from Bruce VanderLee.

Introductions & Description of Team Members Goals:

SDGFP currently protects threatened or endangered species through South Dakota state endangered species law, Section VI Cooperative Agreements, and the Missouri River MOA. GFP would like to see better coordination and long-term planning on threatened and endangered species recovery.

Attendees identified what they/their agency could bring to the team and what they hoped to gain from the management plan.

Natalie: Agency would assist with recovery plan updates and provide help as needed

Eileen: GFP is strongly committed to developing plans. There is some urgency to completing this task now, while the current Secretary (John Cooper), who has a real interest in it, is in office. GFP would like this plan to allow Parks to focus on avoiding areas where the birds are/are likely to be in the future, enabling them to direct recreators elsewhere.

Carol: Write the plan, work with team to come up with goals for South Dakota that promote rangewide recovery.

Rich: Private landowner participation/habitat enhancement.

Pat: Needs assistance with how to manage user/bird conflicts and ways to communicate these efforts to the public. Long-term planning.

Greg: Monitoring information. The Corps has been monitoring productivity since 1993, also modeling about habitat needs and island succession.

Steve: River stretches from Fort Randall Dam to Ponca State Park are NPS' areas of interest. Projects that might modify habitat or impact the free-flowing river are subject to NPS' environmental review processes.. They are developing planning documents and hope to incorporate South Dakota's plans.

Matt: Lower Brule has been working with the Corps to try to create habitat for terns & plovers, but the funding has dried up. Matt did fieldwork on terns in graduate school.

Karen: Current Service lead on plovers. Hopes to develop an updated recovery plan.

Erika: Input on the Missouri River stretch through Nebraska; supports revised recovery plans.

Sheldon: Looking to work together with other agencies. The Yankton Sioux tribe is working on a management plan.

Joanna: The tribe has participated in some surveys with the Corps and is interested in ongoing projects.

Island Development:

Matt explained that the Lower Brule tribe had proposed an island development project located at Big Bend, just North of an existing island. There is some concern that boaters and other recreators may use the island, but Matt thinks that the approach is too shallow. If it is developed and the birds use it, they will fence and put up signs to keep people out.

The Corps had originally budgeted for \$43 million for tern, plover, and pallid work. Only \$23 million was approved, of which \$3.5 million is designated for terns and plovers. Greg thinks there will be about \$1/2 million available for habitat creation (point of reference: the Lower Brule project was expected to cost approximately \$1 million). Bush's proposed budget for 2005 includes \$69 million for terns, plovers and pallids.

There needs to be an approximately 3:1 ratio of foraging to nesting area on islands for the birds to raise young.

Public Outreach:

GFP has identified organizations and individuals who may not have the time or biological background to participate on the core team, but who would like to be kept informed of the plan's progress. Please review the attached list of groups that will be updated and let me know of any additional groups who should receive updates.

There is a management plan link on the GFP website: http://www.sdgfp.info/Wildlife/WildlifePlans/Index.htm
Suggestions for FAQ's would be greatly appreciated.

Pat suggested that we develop a link with Parks web pages so visitors can learn about beach closures in specific locations before setting out. He also requested that the Corps field crews inform Park supervisors about fencing before or immediately after they put it up so that Parks staff can better inform the public. Joanna suggested that this information also be relayed to tribes along the Missouri. The website should also include photographs of the fencing, the nest colony signs, and information about bird behavior, such as what disturbed birds look/act like, to help the public better understand the issue.

Next year's fishing handbook could include a page describing pallids, terns and plovers to help inform anglers about why to keep away from nest sites.

Rich asked if there is a short video available about terns and plovers that could be shown to hunting and fishing groups. There are several longer documentaries, but nothing short is available at this time.

Goals from other documents:

Carol explained the goals set out in the tern and plover recovery plans and in the 2000 and 2003 BOs (enclosed).

At the time the Recovery Plans were developed (1988 for plovers, 1990 for terns) very little was known about the populations, and goals were based on "best professional judgement." There is a Draft Plover Recovery Plan (1994), but it was never finalized. Karen thinks that the 1994 plan was based on more biological information than the 1988 version.

The 2000 BO calls for a 0.7 fledge ratio (fledglings/pair) for terns. This number was taken from Thompson (1982). However, Thompson used fledglings/bird as the measurement unit. Note: the 0.94 fledge ratio called for in the 2003 BO was based on the average tern fledge ratio for the past 10 years (1994-2003).

Karen did a "worst case scenario" analysis of the numbers of terns and plovers impacted by Corps operations (enclosed).

Recovery Goals for the South Dakota Management Plan:

Suggested measures of success: number of birds, number of pairs, fledge ratio, amount of habitat, or some combination of the above.

Eileen stressed that GFP wants the plan to be recognized by the Service in a formal way. The plan should focus on aspects of tern and plover management that the state can control.

Karen suggested that the team develop objective criteria for the 5 listing factors identified by the Service (1. present or threatened loss of habitat or range, 2. overutilization for commercial, scientific, educational, or recreational purposes, 3. disease & predation, 4. inadequacy of existing regulations, and 5. other natural or man-made factors). She also suggested that we look at a 2001 draft recovery plan for plovers. The plan has not been reviewed, but might provide some useful ideas about different ways to set goals for plovers.

Greg noted that neither number of birds nor fledge ratio alone are good indicators of success. Both terns and plovers are boom and bust populations that can change nesting locations over large distances and experience considerably variation in fledging success annually. Currently, the Atlantic coast population of plovers is increasing, while the Great Plains population is decreasing and the range shrinking. Matt suggested that we consider some sort of formula incorporating acres of available habitat in a given year correlated with numbers of birds present and possibly fledge ratio (i.e. with X acres of habitat available, there should be Y numbers of birds present, with an average of X acres and Y birds over a Z-year period). Because populations fluctuate widely, goals need to be set using a several year average. Currently most birds are in the 50-mile stretch below Gavins Point which could put them at risk in the case of a single catastrophic event. Long-term trends are very important. Karen suggested that we try to relate measureable objectives back to the five listing factors.

The group agreed that flows are the best option for developing habitat for terns and plovers, and the management plan should reflect that. Pre-dam, the river had two spring peaks, one when the prairie snows melted, and a second during melt in the mountains. Greg thinks that 60,000 CFS out of Gavins Point Dam for three weeks in the spring would create sandbars.

Rich suggested that the plan lay out hydrology information about how much habitat will be created and exposed under various flow regimes. How much flow would be required to create appropriate habitat? Bruce VanderLee with the Corps is developing this information, and also information about island succession. The Corps is presently developing a protocol to monitor created habitat, both in terms of bird use and sandbar longevity. The Corps is also planning a major banding study to try to determine bird fates on Lake Sakakawea and Gavins Point reach as a companion to the Canadian banding effort.

Since the state has no control over flows, and we cannot foresee when the politics of the basin will allow for flows, the document should offer a "Plan B" that offers alternatives that the state has more control over. These may include island building and nest protection, as well variation in water levels in Oahe (a three-year high cycle of high, medium and low water levels) as described in the new Master Manual.

The team seemed to agree that more information was needed to aid in developing biologically sound goals. Information needs include:

- -census information (there have been three international piping plover censuses),
- -fledge ratio and juvenile survival rates (both terns & plovers),
- -rangewide least tern information, and
- -other information team members feel we need let me know.

The team agreed that updated Service Recovery Plans would be helpful in the State's efforts to develop management plans. We will draft a letter to send to the Service regional or national office requesting that they update management plans.

Literature cited:

Thompson, B.C. 1982. Distribution, colony characteristics, and populations status of least terms breeding on the Texas coast. Ph.D. Dissertation. Texas A&M University.

Appendix J - Second meeting report of SD Least Tern and Piping Plover Management Team – May 13, 2004

Conference Call, May 13, 2004

Next Meeting: Conference Call, July 20, 10:00 AM Central Time

Attendees:
Carol Aron, FWS/SDGFP SD
Pat Buscher, SDGFP
Karen Kreil, FWS ND
Greg Pavelka, USACE
Erika Wilson, FWS NE

Items/Assignments for Next Meeting

All: Look at fledge ratio information. Think about appropriate goals for SD. Greg: Draft tern & plover training manual to Carol, Erika & Karen.

Updates on 2003 BO Issues

Karen said that all of lawsuits pertaining to the Missouri River are scheduled to go before Judge Magnuson on May 21. By June 7, the Corps will have an assessment of whether or not they will reach the 1,200-acre shallow water habitat goal.

Island creation planing is still in flux. At the meeting, the latest information was that the Corps did not think that they would be able to build the three proposed potential habitat complexes for terns and plovers this summer and probably not this fiscal year because;

- 1. the funding was being used for shallow water habitat (for pallids) and
- 2. it was unlikely that the Park Service would be able to perform their Section 7 consultation process in time for construction this year.

They are unlikely to use 2004 funding.

However, the above information was updated on May 14. The NPS will devote an employee to the Section 7 process, with an expected completion date by August 15. The corps then hopes to bid out the work in September, with completion in the fall of 2004.

Flow Update

Currently, the corps is operating a 3-day spiking flow system, with two days at 26-27 cfs, and the third day at 30 cfs. They hope to inundate the low sandbars often enough to prevent birds from nesting on them so that they don't become flooded later in the season. The Service is not altogether happy with this method since it does not mimic the natural flow regime in any way. The Corps may start peaking flows out of Garrison Dam this weekend, depending on rain in the lower basin. It would start at around 17-18 cfs, and may peak up to 19 cfs.

The releases are for a navigation target at Kansas City. The Corps is planning to go for a full-time 30,000 cfs out of Gavins Point Dam by next week (week of May 17) to meet the Kansas City target. A major rain event is forecast for the lower basin, which would mean that there is less water required from the upper and middle-upper basin. They are trying to maintain Sakakawea at a stable or rising pool.

Tern & Plover Update

Piping plovers are present below Garrison, Randall and Gavins Point Dams. Terns have not yet been seen on the Missouri, although they have been seen on the Kansas River, so we expect them to arrive in South Dakota shortly. One plover nest with three eggs is located on a low island that the Corps was trying to flood via the peaking technique. It may still be above water at 30,000 cfs.

Calls regarding tern and plover nesting between the Service and the Corps have begun and are taking place weekly.

Greg reported that the Corp's Data Management System for tern and plover nests is up again. People who need access to the system should contact Casey.

Request for Service to update tern and plover Recovery Plans

Since GFP initiated and convened the team, team members suggested that the letter go out on GFP letterhead and Cooper sign it for the team. Carol will discuss this with Cooper to see if he is amenable. A list of team members will remain. Karen requested more time to review the letter before it was sent. Carol will wait until she hears from Karen to finalize and send it.

Grant Request: Habitat Conservation Planning Funding

Carol developed a last minute grant application last week for Fish and Wildlife Service funds available for Habitat Conservation Planning funds. For terns and plovers, the grant requests money for:

- 1. plover surveys on South Dakota alkali lakes,
- 2. tern surveys on the Chevenne River,
- 3. a Population and Habitat Viability Assessment (PHVA) for terns, and
- 4. a PHVA for plovers.

Carol will send a copy of the proposal to team members.

Alkali lake surveys in South Dakota were included in the 1991 and 1996 International Plover Census, but few (no?) birds were found. These areas were not surveyed in the 2001 census. (Note: this is not correct, 15 sites off of the Missouri River were surveyed in 2001, but no birds were found. Nell McPhillips reported that water was so high in 2001 that there was no shoreline available for nesting.) The team agreed that it would be worth surveying South Dakota's alkali

lakes again. The team does not think that there is much development pressure on the alkali lakes.

The team discussed whether this is the appropriate group to initiate a population-wide viability analysis. If the funding comes through to perform a PHVA, the larger tern and plover community would become involved and may organize and run the process. However, the South Dakota team would clearly benefit from the results from such an analysis. Just because we aren't the sole, or even the major, players in species' recovery is not a reason not to initiate efforts that will benefit everyone.

Proposed Fledge Ratio Goals for South Dakota

Members expressed concern at developing fledge ratio goals, especially since these may conflict with the fledge ratios set out in the 2003 BO. Members suggested waiting until the litigation over the 2003 BO is complete, and instead focusing on actions that SDGFP plans take, and the positive and negative impacts on the species. However, given the likely extended timeframe of litigation, and the need for the state to develop goals, the team agreed that it is appropriate for South Dakota to develop management goals, including fledge ratio goals.

For both species, the team agreed that a three-year or even five-year average is too short. One good (or bad) event can influence productivity for several years, which does not indicate long-term species' recovery. For example, the 1997 floods caused several years of high fledge ratios for both terns and plovers. Habitat has degraded since, and the last five to six years of high fledge ratios are not expected to be sustained. The team agreed that the fledge ratio should be based on a minimum ten-year running average. Greg suggested that the ratio should be calculated using total numbers of fledglings divided by total numbers of adults (rather than averaging the annual fledge ratios).

In using the Corp's historic data, Greg said that he would not use Oahe numbers before 1994 since fledglings were not surveyed, at least not comprehensively. From 1986-1992, he would only include information from the Gavins Point, Lewis and Clark Lake, and Fort Randall stretches.

Greg noted that productivity data can be broken into pre-1997 (the high water year when there was extensive flooding and island creation) and post-1997. Pre-97, there were often large numbers of birds, but poor productivity. Post '97, tern productivity picked up right away, with plover productivity lagging a year or so. Currently, plover productivity is dropping off on river stretches but is still high on Oahe (as of 2003). Because of continuing drought conditions, there is a lot of exposed habitat.

For least tern, the team suggested that South Dakota should set a goal based on Thompson (1982), in the 1.0-1.34 fledgling/pair range. Carol said that she does

not see the utility in using ranges for a goal, since the higher number does not seem to convey anything. In this case, 1.34 is probably not a reasonable long-term goal since even the five-year average since 1998 was not that high. Team members suggested examining the average fledge ratio from 1998 to 2003 (attached), and considering using that number as a goal. Such a fledge ratio is clearly within the realm of possibility, since it has been met before, and the team thought that it was high enough, that if sustained, would engender species' recovery.

For piping plover, team members suggested that South Dakota use a minimum 1.25 fledge ratio (based on Larson et al. 2002). The team will also look at fledge ratios since 1998 for plovers and consider using a fledge ratio from 1998 to 2003 (attached). Greg suggested that the team consider using one ratio for river stretches and one for reservoirs. He thinks that Lewis and Clark Lake functions more like a river than a reservoir stretch, since in the upper end where the birds are, they are nesting on islands created by sedimentation.

Next Meeting

The group agreed to start developing population goals at the next meeting. Carol will come up with some suggested numbers to use as a starting place for discussion.

For both species, Greg suggested breaking South Dakota up by regions with population goals for each region. This could include the lake and river stretches, the Cheyenne River for terns, and alkali lakes for plovers. Even if the team ends up "lumping" all of these categories to create a single goal for each species, it would be worth examining areas separately.

The team will also start discussing ways that GFP can manage areas for terns and plovers. Karen suggested that we start by looking at threats to the species and ways that these can be counteracted. Carol will start developing a list of threats.

Next meeting: Conference Call, 10:00 AM Central Time, July 20, 2004.

Literature cited:

Larson, M.A., M.R. Ryan, & R.K. Murphy. 2002. Population viability of Piping Plovers: effects of predator exclusion. Journal of Wildlife Management. 66(2) 361-371.

Thompson, B.C. 1982. Distribution, colony characteristics, and populations status of least terns breeding on the Texas coast. Ph.D. Dissertation. Texas A&M University.

Appendix K - Third meeting report of SD Least Tern and Piping Plover Management Team – July 20, 2004

Conference Call, July 20, 2004

Next Meeting: Conference Call, September 15, 10:00 AM Central Time

Attendees:

Carol Aron, FWS/SDGFP
Eileen Dowd Stukel, SDGFP
Natalie Gates, FWS SD
Ken Higgins, SDSU (for threats discussion only)
K.C. (Kent) Jensen, SDSU
Karen Kreil, FWS ND
Casey Kruse, USACE
Erika Wilson, FWS NE

Team Assignments:

Review "Threats" document and contact Carol with any suggestions/changes etc.

General:

In South Dakota, plover numbers are up slightly this year from last (590 birds in 2004, compared with 581 in 2003), making this another record year. Least tern numbers are down slightly, 508 birds in 2004 compared with 522 in 2003. Systemwide, the trend is the same, with approximately 1,550 piping plovers, up 17-19% from last year, mostly on Lake Sakakawea, and with terns at 725 birds, down from 740 in 2003. Nest losses thus far have been primarily attributed to predation and weather. The crews are having difficulty spotting chicks because of vegetation.

The Corps is working on a population viability analysis (PVA) with the Lincoln Park Zoo to examine how captive rearing might fit on the Missouri River piping plover population (this analysis looks exclusively at the Missouri River population, not alkali lakes etc.). They are running a baseline model on the population and then developing alternative scenarios, including captive rearing. The effects of these alternative scenarios will then be compared to the baseline information for direction and magnitude of population impacts. This analysis is expected to be completed by the end of this year or early next.

Created Islands at Ponca:

Two of the three islands in the complex developed at Ponca have nests on them, with 48 tern nests and seven plover nests to date. They (not sure which organization) are testing for macroinvertebrates using sticky-sticks. NE Game and Parks is looking at fish in the backwater areas where the terns seem to be foraging almost exclusively. Up to 50 terns have been seen foraging in that area.

Threats & SDGFP Management Options:

Ken noted that the threats assessment discusses flooding as an issue related to unpredictable water levels and suggested that drought could impact the birds, particularly plovers, since it may impact macroinvertebrate production.

He also wondered whether we should consider some alternate means of predator control, such as strobe lights. Strobe lights have been used in the past, but were not reliable enough to determine how well they worked. With newer technology, they should work much more consistently. Casey said that strobes are effective only with certain types of predators - notably night herons - and that on the Missouri, great horned owls seem to be the major night predator. There are more specific ways of reducing owl predation. There have been cases in the past where some predators have used the lights as perches or actually used the lights to see by. In addition, strobe lights are very labor intensive and quite intrusive to put up and maintain.

Carol asked about the use of predator control cages on plover nests. While the Gavins crew cages nearly all plover nests, the Oahe crew rarely uses them because they attract cattle, which rub on them & thus destroy the nests. Casey said that crews are applying cages on a situation-by-situation basis. They are trying to avoid developing "smart predators" which use the cage to cue in on nests. Karen said that on the John E. Williams Preserve in North Dakota, they lost 12 caged adult plovers to northern harriers, and have subsequently removed all cages. They are currently evaluating all cage use on alkali lakes.

Recognizing that the Corps has primary responsibility for the river system and the ability to control it to benefit the birds, the threats document identifies actions that SDGFP can make to benefit terns and plovers. The team will read over the threats assessment document and SDGFP's management options and get back to Carol with any suggestions etc. Casey said that he appreciates SDGFP's commitment to expedite permitting procedures for habitat work.

Fledge Ratios

- plovers:

At the last meeting, the team had determined that 1.25 might be an appropriate fledge ratio based on the literature, but determined that we should also look at fledge ratios since 1998 (after the high water); from 1998-2003, the average fledge ratio is 1.69. However, the team agreed that it would make more sense to look to research and modeling, including survival and longevity information, to determine required fledge ratios rather than simply basing the goal on what's been seen in the past. In particular, Casey recommended that we look to Larson's work. 1.25 does seem to be a reasonable goal to promote recovery, but we need to make sure that the plan demonstrates that the data and published research supports that ratio, given that promoting recovery is the ultimate goal.

-terns:

As with plovers, the team agreed that it would be best to develop a fledge ratio backed by reasoning from the literature rather than looking at past numbers. Dugger's work suggests that 1.0 might be a good fledge ratio to promote recovery, although her work is on least terns on the Mississippi River. Unlike plovers, for which the Missouri River is an important component of the species' range, this is the edge of the tern's range. It is not clear how the Missouri fits into the least tern population as a whole; whether it is a source or sink, or if the Missouri populations are even necessary for species recovery as a whole.

The team agreed that it doesn't make sense to have reach-by-reach goals, and will just have one fledge ratio goal for each species for all of South Dakota. (In fact, it would probably make more sense to set Dakotas goals, or even Northern Great Plains goals.)

Population Numbers:

The numbers are currently really high because of habitat created in the 1997 floods and the current drought situation which provides more habitat along the reservoirs. As with fledge ratios, the team agreed that it would be better to choose goal numbers based on some estimate of what is required to maintain the population rather than to simply go with the numbers in the Recovery Plans or based on numbers of birds seen in the past. Karen suggested looking at the methods outlined in the 2001 draft recovery plan that Lauren Wemmer developed including such parameters as: surveys, historical population data, viable habitat, and potential habitat. We need to make sure to keep in mind that the plan needs to be realistic in terms of what the state and partners can accomplish. For example, it would be extremely expensive for the state to identify and manage all unoccupied or potentially historically occupied sites. We might want to focus on currently used sites and likely potentially used sites.

Because of the longevity of both species, the team thought that requiring the goals for both species to be met over a 15-year time span was safer than using a 10-year span to ensure that the numbers include a cross section of all age cohorts.

In setting both population and fledge ratio goals, it is important to keep in mind that these are highly dynamic, mobile species that readily move over large distances if conditions in one area are not suitable. We need to build some flexibility into the plan to allow for natural population fluctuations. For example, the fledge ratios and population numbers were both fairly low in 1996-1997, but the conditions that those high water years created led to record fledge ratios and population numbers in subsequent years. Some mechanism needs to be included to allow and even encourage years where numbers are low but habitat is being replenished for improved habitat in future years. We need to keep South Dakota's goals in perspective with the population as a whole. For example, we may experience high numbers in South Dakota, while few birds are nesting in more northerly locations or vice-versa.

Next Meeting: Conference Call September 15, 10:00 Central Time

Appendix L - Fourth meeting report of SD Least Tern and Piping Plover Management Team – September 15, 2004

Conference Call, September 15, 2004

Next Meeting: Conference Call, 10:00 AM Central Time November 9

Attendees:
Carol Aron, FWS/SDGFP
Pat Buscher, SDGFP
Greg Pavelka, USACE
Sheldon Selwyn, Yankton Sioux Tribe

I'd appreciate help with:

- 1. Please let me know if you can NOT make the November 9 meeting. I'd like to try to get a time when most people are available.
- 2. Let me know what you think of the method of determining a population goal as indicated below. If you think that this manner of determining a population goal is reasonable to begin with, which year(s) do you think we should base the tern and plover goals on?
- 3. If anyone has comments on the "State Goals" document (I'll attach it again), please let me know.

Season Recap:

The plover numbers in South Dakota were very similar to last year, with 580 plovers in 2004 and 581 in 2003. Fledge ratio has dropped however, with an 11 percent decline from 2003 (1.85 chicks/adult pair) and 2004 (1.64 chicks/adult pair). Numbers on Oahe and Fort Randall were way up, with no birds on Lewis and Clark Lake, and Gavins Point down.

Least terns declined this year, with 451 birds in South Dakota compared with 522 last year. On the other hand, fledge ratio was up, 1.07 in 2004 compared with 0.77 in 2003. Most (359) of those birds were on the Gavins Point Stretch.

Habitat:

There were three habitat restoration projects this year, one below Fort Randall, one on Lewis and Clark Lake, and one near Ponca below Gavins Point dam. The Ponca site was very successful, especially for terns, but neither of the other two produced fledglings. Weather, predation and human disturbance were primarily to blame. There were also problems with human activity on the Ponca sandbars, but no nest losses were attributed to human disturbance. The Ponca site is eroding, with about three acres lost in the three months since construction.

On Lake Sakakawea and Lake Oahe, both tern and plover numbers have increased as more land has been exposed. On Oahe, tern numbers have also

increased as the reservoir has declined and they seem to be fledging young successfully.

The birds, especially plovers, are nesting on unusual substrates on Oahe, including shale and mudflat areas. When the reservoirs rise, the Corps hopes to be able to keep high numbers of birds in some years by the three-year unbalancing cycle. Carol wondered if a three-year cycle is long enough given the birds' site fidelity and the fact that it seemed to take them three years to find the good habitat following 1997.

The birds have used areas on Little Bend, Cow Creek, and Okobojo, generally below 1607 (the line below which the Corps owns and will not be transferred). The areas used by the birds have been fenced off when the birds use them, but it is unlikely that GFP will do more in depth active management on land owned by the Corps.

Habitat Development:

The Corps plans to put sandbars 20 to 40 miles below Gavins Point Dam, and wonders if South Dakota would be interested in monitoring/managing those sandbars. Carol will discuss this with the state.

Greg is concerned with the requirements in the BO for Lewis and Clark Lake. The birds only use the upper portion, so it seems likely there will need to be more like 160 acres of habitat per river mile on part of it, and none on other parts. Conversely, the Fort Randall stretch might be able to support a large number of birds, but only 20 acres per river mile are required.

Population Goals:

The group seemed to like the idea of correlating goal number of birds to amount of habitat. They agreed that having the numbers reached over a ten-year average is probably good as it allows for a variety of conditions. Greg suggested setting the goal using an average of the amount of habitat from 1999-2001 or 2000-2003 as shown below.

Least Terns

River Stretch	2000	2000 Based	2002	2002 Based
	Numbers	Goal	Numbers	Goal
Oahe	50	50	73	73
Fort Randall	106	165	84	131
Lewis & Clark	10	16	42	66
Lake				
Gavins Point	206	321	314	490
Total # Birds	372	552	513	760

River Stretch				2000-2003 Based Goal
Oahe	47	47	59	59
Fort Randall	100	156	87	135.72

Lewis & Clark Lake	44	68.64	33	51.48
Gavins Point	200	312	251	391.56
Total # Birds	391	583.64	430	637.76

Piping Plovers

River Stretch	2000	2000 Based	2002	2002 Based
	Numbers	Goal	Numbers	Goal
Oahe	77	77	142	142
Fort Randall	62	97	35	55
Lewis & Clark	26	41	42	66
Lake				
Gavins Point	186	290	260	406
Total # Birds	351	505	479	670
Total # Pairs	176	253	240	335

River Stretch	Average	1999-2002	Average	2000-2003
	1999-2002	Based Goal	2000-2003	Based Goal
Oahe	68	68	111	111
Fort Randall	50	78	45	70.2
Lewis & Clark Lake	40	62.4	31	48.36
Gavins Point	182	283.92	221	344.76
Total # Birds	340	492.32	408	574.32
Total # Pairs	170	246.16	204	287.16

Threats Assessment:

The Corps has been working with the COs to try to prevent human disturbance, especially below Gavins Point Dam. The Park Service now owns one island near the Myron Grove boat ramp, and will work to try to keep people off it during the nesting season, but state CO's still have authority for law enforcement actions on it.

Pat noted that he would appreciate more communication between the Corps and the state people about sites where birds are. He suggested that the Corps (Greg?) e-mail information to a list of people weekly during the nesting season with maps showing nesting area locations. Pat will send Greg an e-mail list of people who should be updated.

Appendix M - Fifth meeting report of SD Least Tern and Piping Plover Management Team – November 9, 2004

Conference Call, November 9, 2004

Next Meeting: Conference Call, 10:00 AM Central Time January 11

Attendees:

Carol Aron, FWS/SDGFP
Pat Buscher, SDGFP
Eileen Dowd Stukel, SDGFP
Natalie Gates, USFWS
Josh Kiesow, Lower Brule Tribe
Karen Kreil, USFWS
Rich Madson, USFWS
Greg Pavelka, USACE
Martha Tacha, USFWS

Habitat Goals:

While the BO will use an adaptive management approach to evaluate the amount of habitat that the Corps needs to provide to avoid jeopardy, for now we should consider that the goals set out in the 2003 BO are pretty solid. The South Dakota plan can reasonably follow the goals for the Fort Randall, Lewis & Clark Lake & Gavins Point stretches to be those in the 2003 BO (20 acres/river mile for the Fort Randall River stretch, 80 acres/river mile for the Lewis and Clark Lake, and 80 acres/river mile for the Gavins stretch). Achievement of those goals is primarily in the Corps' hands anyway. On Oahe, much (all in low water years?) of the land that the birds use is below the high water mark, and thus also under the Corps' jurisdiction.

The state has already committed to protecting nests where they occur on Oahe (in campgrounds etc.), but we need to come up with a way to define the extent to which we're willing to protect nests. E.g. in a high water year, when the birds are pushed up to the higher areas above the 1806' line, the state would probably not be willing to close a boat ramp because of a nest.

Greg noted that the Corps is building an island below Gavins Point Dam at 761.3. It will become South Dakota property since it is on the South Dakota side. He asked whether the plan will include a provision that the primary purpose of this island is for endangered species purposes. Carol and Eileen will discuss that issue with the state regional people. The other two islands currently under construction fall on the Nebraska side (one owned by Ponca State Park and the other by a private landowner). The Corps has made an agreement with the Park Service for a two-year moratorium on building further sandbar habitats in the Fort Randall or Gavins Point stretches after this round of island construction so that the impacts of these islands can be evaluated. The next potential island creation

project in the Missouri National Recreational River would be in the fall of 2006. A number of problems arose because of the poor coordination on the Corps' part prior to recent sandbar creation, including the lack of preconstruction biological surveys. The state management plan presents an opportunity to put this habitat enhancement technique in perspective and compare its usability to other options. To avoid a repeat of the coordination issues associated with the sandbar creation, it would be helpful for the Corps and SDGFP to develop a systematic review process for future projects.

The Corps and the Lower Brule Sioux Tribe were discussing building a sandbar complex near Lower Brule last year. The funding on this project fell through, although discussions may start again. Also, Lake Sharpe has not been surveyed for some years, and Lake Francis Case is surveyed only about once a year during the annual census. Greg and Josh will visit about the possibility of Lower Brule contracting with the Corps to do surveys on Lake Sharpe.

Population Goals:

The group discussed the benefits of using the entire data set (1986 through 2004) as a basis for the goals versus just basing goals on an average of the highest five years of data. Using the highest five years of data would allow us to set the goals on known achievable levels and aim high, while using the entire data set would incorporate the full range of environmental and habitat conditions.

The group agreed that it probably makes more sense to base the goals on the entire data set since; (a) this provides information about population numbers under a range of habitat conditions and (b) we want to allow or even encourage some bad years in terms of bird productivity if this provides long-term habitat benefits - as we learned from the 1997 high water. The group generally agreed that using the long-term average probably makes the best sense as a basis for the population goals. Carol will write up an explanation of the goals and the reasoning behind them for the team to review and discuss.

Since the population goals in the USFWS recovery plans were based on best professional judgement and we have a great deal of new information since they were completed, the group felt that we are justified in setting updated goals based on the substantial body of new information.

Grant Money:

The state received a grant from the USFWS which includes \$22,500 each for a PVA for terns and plovers. The group discussed the merits of doing a PVA on one or both species. There has probably been enough work done on plovers that another PVA may not provide substantial new information, but there has been less work done on terns. (There is also less information available for terns, so the PVA would require more extrapolation and thus be less reliable.) Carol wondered if it would be worth doing a PVA asking the question of how many terns would be a reasonable goal for South Dakota in terms of the rangewide

population. She will discuss this with the newly formed interior least tern monitoring group which Casey Lott with American Bird Conservancy is heading up. The CBSG, Mark Ryan or one of his students may be interested in doing a PVA. PVA work in the past has documented the impact of predator control for the piping plover at alkaline lakes in North Dakota.

Monitoring:

Rich mentioned that he may have some volunteers who would be interested in surveying the alkaline lakes. Alkaline lakes in South Dakota are currently only surveyed for the International Piping Plover Census every five years (the next one is in 2006). The group agreed that if people are willing to help monitor, it would provide good information. Since alkaline lakes in South Dakota are primarily on private land, they will not play a large role in the state plan.

Oahe Habitat Evaluation:

The Corps was set to evaluate the habitat on Lake Oahe next summer, but Bruce VanderLee is moving on to a new job. The Corps is starting to look for a new person for that position, but it is up in the air right now.

Looking ahead:

Carol will talk with state people about getting a page in next year's fisheries handbook about the importance of leaving tern & plover nesting areas alone.

Carol will send out a draft plan in the next few weeks for review & comment. If you think of any additional issues etc. that we should address, either now or in the future, let me know. At some point in the near future, we should also be thinking about how this relates to the HCP process.

Revisiting the MOA 2000-2004; Looking back, looking ahead March 10, 2004, Al's Oasis, Chamberlain, SD

Attendee List

Name	Organization	E-mail	Phone
Carol Aron	FWS/GFP	carol.aron@state.sd.us	605-773-2745
Charlene	FWS	charlene_bessken@fws.gov	605-224-8693 X 31
Bessken			
John	FWS	john_blankenship@fws.gov	303-236-7920
Blankenship			
John Brooks	FWS-LE	john t brooks@fws.gov	605-224-1001
John Cooper	GFP	john.cooper@state.sd.us	605-773-3718
Eileen Dowd	GFP	eileen.dowdstukel@state.sd.us	605-773-4229
Stukel			
Keith Fink	USACE	keith.j.fink@usace.army.mil	605-245-2255
Dale Gates	GFP	dale.gates@state.sd.us	605-223-7707
Natalie Gates	FWS	natalie gates@fws.gov	605-224-8693 X 34
Pete Gober	FWS	pete_gober@fws.gov	605-224-8693 X 24
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Steve Krentz	FWS	steven krentz@fws.gov	701-250-4419
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Marty Pennock	GFP	marty.pennock@state.sd.us	605-362-2710
Arden Peterson	GFP	arden.petersen@state.sd.us	605-362-2706
Phil Sheffield	USACE	phillip.r.sheffield@usace.army.mil	605-224-5862
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Russell	USACE	russell.a.somsen@usace.army.mil	605-224-5862
Somsen			
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Bruce Vander	USACE	bruce.a.vanderlee@usace.army.mil	402-667-2583
Lee			
Rod Vaughn	USACE	rod.l.vaughn@usace.army.mil	605-245-2255

Cooper opened the meeting with some background on the development of the MOA. Under Title VI of the 1999 Water Resources Act, recreation lands and wildlife mitigation lands are being transferred from the US Army Corps of Engineers (Corps) to the South Dakota Game, Fish and Parks (SDGFP). Cooper considers that the state has the same responsibilities for environmental and cultural resources as federal agencies. The MOA was developed primarily to focus on management of the lands and enforcement of all Federal regulations (in particular the Endangered Species Act (ESA) and Clean Water Act; there is a separate MOA for the Cultural Resources Act). It provides a reference to determine what each agency's role is. SDGFP has two primary goals at this point:

- make sure that all agencies are fulfilling their responsibilities laid out in the MOA and
- 2. develop management plans for the Federally listed species on the Missouri River.

Cooper also mentioned that the Crow Creek Tribe has recently expressed an interest in being added to Title VI.

Management Plans:

SDGFP would like the management plans to be formalized with the US Fish and Wildlife Service (USFWS), likely through a Habitat Conservation Plan (HCP). This recognition from the USFWS will enable the state to do long-term planning for recreation and wildlife areas.

Carol said that the plans will be set in the context of rangewide species recovery. A bald eagle team has met several times, and a least tern and piping plover team will meet next week. The bald eagle team is currently collecting existing conditions data. This plan will use a habitat-based approach and will include a cottonwood management plan.

- 1) aerial flights to search for nests to start shortly
 - post-flight monitoring will require a statewide effort including state and federal personnel as well as volunteers as needed
 - Emmett expressed concern about using COs for this effort. COs are already overextended, and he is wary of adding additional duties. Carol noted that nests will be checked by federal (FWS and Corps) employees and other state employees as well as COs, so the COs' role in monitoring should be minimal. The monitoring protocol was designed to be fast and easy. After this first year when we are still learning how the monitoring process will work, other sources of monitors (schools, graduate students etc.) may be used.
- 2) forest inventories on bald eagle winter roosting areas to be done this summerwill focus on dam downstream areas
- 3) GIS model of cottonwoods along the Missouri.

Blankenship said that bald eagles may be delisted soon (possibly before November?). Since the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act will still protect them, bald eagle take would still be illegal.

Section 7 ESA:

Currently, state projects undergo a similar review process as Corps projects to ensure that they do not adversely impact threatened or endangered species. This has allowed for consistent enforcement regardless of ownership status (state or federal). Projects are reviewed on a case-by-case basis.

Matt gave some examples of how the Parks department has worked through the USFWS Section 7 process.

- the department decided to turn a proposed picnic area into a bald eagle protection area when they learned about bald eagle use of the area
- a proposed trail was relocated when the department learned that associated bank stabilization would adversely impact a Topeka shiner stream
- habitat restoration projects are underway on Farm Island

Cooper noted that visitation is increasing dramatically in all recreation areas throughout the state, a trend that is likely to continue. The Parks department would like to be able to plan for the future, both to enhance and protect areas for wildlife, and to plan for areas that can be developed for recreation. While the Section 7 process has worked well so far, long-term planning would be much easier if the management plans are formalized with USFWS.

Law Enforcement:

SDGFP Conservation Officers have been working with USFWS law enforcement on least tern & piping plover issues along the river. Both SDGFP Regions 2 and 3 had few incidents last summer, probably because of low water levels and reduced boat ramp access. Emmett does not anticipate many problems this summer either. They may do some flights this summer to help focus law enforcement activities. Emmett recommends:

- 1. better signage at boat ramps informing recreators to avoid nesting islands,
- 2. more public outreach in newspapers, radio and television to inform the public about threatened and endangered species concerns, and
- 3. increased communication from the Corps about problem locations. SDGFP and the Corps will develop phone lists so that they can contact each other regarding potential problems. Arden recommended that the Corps not only contact the local CO, but the appropriate regional office with urgent enforcement needs, in case a CO is not available on short notice.

Mike said that Lake Andes USFWS staff can provide additional law enforcement during key weekends (e.g. July 4th) along the river.

At some point, SDGFP needs to be updated by USFWS LE regarding USFWS enforcement assistance plans for the upcoming nesting season.

Eileen identified the following ways that the group had identified to improve the MOA:

- 1. update the MOA contact list so that tern and plover violations can be investigated promptly,
- 2. better communication between field crews and regional offices (i.e. Arden's suggestion listed above),
- 3. continue outreach and education about endangered species issues (television, newspapers, radio),

- 4. make sure that all agencies are aware of new habitat that the Corps creates for terns, plovers, or pallids,
- Corps island renovation projects should be reviewed by the appropriate SDGFP regional staff (regional supervisor and regional land manager) in addition to review by the SD Natural Heritage Program staff,
- Remove the word "backwater" from D(2). Recent research has found that pallids use the mainstem river as well as backwater areas. Other MOA wording changes should be sent to Eileen for a revised version.
- 7. The National Park Service should be considered as an additional signatory agency on the MOA.

Recovery Plans and Region-wide Efforts:

The recovery plans for all four species are more than ten years old, making SDGFP's job of trying to determine biologically appropriate state goals more difficult. Blankenship said that he would look into updating the plans. He believes that funding is the issue.

SDGFP would like to see a process whereby all affected states work together. For example, 11 states are working together to develop a prairie dog management plan.

Blankenship and Mike said that the Missouri River Natural Resources Committee (MRNRC) is the most appropriate institution to work on these concerns at this time. Blankenship will raise the issue of rangewide management plans with them.

Section 7 Missouri River Issues:

In the 2003 Biological Opinion Amendment (2003 BO), the Corps offered habitat creation and research to avoid jeopardy for pallid sturgeon, piping plovers, and least terns instead of flow changes as outlined in the 2000 BO. A new USFWS team determined that habitat development for terns and plovers was an appropriate substitute for flow changes, but not for the pallid sturgeon. According to the 2003 BO, the Corps needs to institute flow changes by 2006, in particular at Fort Peck and Gavins Point Dam. At Gavins Point, a bimodal pulse is recommended. The USFWS would like to see an adaptive management approach with a window of flow changes including a spring rise and summer low flow. The Corps has presented a different alternative in their final Environmental Impact Statement (EIS), and the flow issue is not yet resolved. The USFWS will make comments on the final EIS, but await the Corps Record of Decision (ROD), due April 15 to see what the Corps plans. This issue is likely to return to the courts.

SDGFP would like the Corps to store more water in the upper basin during drought to improve fisheries and recreation. The EIS puts more emphasis on navigation. SDGFP comments on the final EIS will primarily reflect fish and wildlife concerns.

Least Tern & Piping Plover Update:

Greg reported a record number of terns and plovers below Gavins Point Dam last year, but the numbers were down in many other areas. One half of all the Missouri River's least terns nested on the Gavins Point reach during 2003. Lake Oahe had a record number of plovers because the water level was low and there was so much land exposed. Water levels are expected to be low again this year, with only 80% of normal runoff expected. For every additional 1,000 CFS of flow, the water rises approximately 2 inches, depending on river morphology etc.

The Corps is looking at increasing shallow water habitat and sandbar islands both by dredging to build up sandbars and by clearing vegetation from existing sandbars. They will submit these projects to SDGFP for review in addition to USFWS.

Pallid Sturgeon Update:

Steve reported that the USFWS will be spawning fish in hatcheries again this year. They hope to catch 6 to 8 adult females and an appropriate number of males to use for this effort. Biologists are concerned with maintaining the genetic stock and in releasing progeny of captive-bred fish. Early results suggest that the released fish are experiencing good survival. USFWS is drafting a propagation plan for hatcheries to ensure consistency in rearing and releasing pallids.

The caviar market has expanded in recent years, and shovelnose commercial fisheries have increased accordingly, with some by-catch of pallids. Both shovelnose and pallid sturgeon fishing are closed in South Dakota, but more signage at boat ramps and public outreach by television, radio, and newspaper would help to eliminate accidental take, particularly as fishermen may start catching released pallids. USFWS would also like to set up a toll-free number for anglers to report pallid catch. Blankenship said that he would assist Steve with public outreach.

Summary:

Blankenship will look into:

- 1. updating the recovery plans. He will get back to SDGFP about this,
- 2. discussing South Dakota's management plan efforts with MRNRC and see if other states would like to become engaged, and
- 3. Developing a Recovery Implementation Team. Cooper and Blankenship will further discuss the RIT at a future date. If necessary, SDGFP can send a letter to Colonel Ubbelohde requesting participation.

Appendix O - News release announcing award of Missouri River HCP Grant – September 23, 2004

NEWS RELEASE

U.S. FISH AND WILDLIFE SERVICE Mountain-Prairie Region 134 Union Boulevard Lakewood, Colorado 80228

04-65 September 23,

2004

For Immediate Release Contacts: Scott Larson 605-224-8693, x32

Carol Aron 605-773-2745 (available next week) Patricia Fisher 202-208-5634

SECRETARY NORTON ANNOUNCES OVER \$70 MILLION IN GRANTS TO SUPPORT LAND ACQUISITION AND CONSERVATION PLANNING FOR ENDANGERED SPECIES

Interior Secretary Gale Norton today announced more than \$70 million in grants to 28 states and one territory to support conservation planning and acquisition of vital habitat for threatened and endangered fish, wildlife and plant species. The grants will benefit species ranging from the Delmarva fox squirrel in the East to peninsular bighorn sheep in the West.

South Dakota will receive \$188,249 for a Statewide Habitat Conservation Plan (HCP). The grant will assist the State of South Dakota in gathering biological data that is essential in development of a statewide Habitat Conservation Plan. The funds will also allow the State to begin developing the operating conservation strategy for the HCP. Because of the large geographic scope of the covered lands, the project has the potential to result in substantial conservation benefits for the pallid sturgeon, least tern, piping plover, and bald eagle.

"The strength of our partnership with the states is clearly one of the keys to the Bush Administration's success in conserving and recovering threatened and endangered species throughout this country," Norton said. "Today's grant awards support state efforts to build and strengthen important cost-effective conservation partnerships with local groups and private landowners to benefit wildlife."

Funded through the Cooperative Endangered Species Conservation Fund and authorized by Section 6 of the Endangered Species Act, the grants will enable states to work with private landowners, conservation groups and other

agencies to initiate conservation planning efforts and acquire and protect habitat to support the conservation of threatened and endangered species.

The Cooperative Endangered Species Fund this year provides \$49 million through the Habitat Conservation Plan Land Acquisition Grants Program, \$8.6 million through the Habitat Conservation Planning Assistance Grants Program and \$13.5 million through the Recovery Land Acquisition Grants Program. The three programs were established to help reduce potential conflicts between the conservation of threatened and endangered species and land development and use.

"These grant programs are some of the many tools we have to help landowners conserve valuable wildlife habitats in the day-to-day management of their lands," U.S. Fish and Wildlife Service Director Steve Williams said. "They help landowners finance the creative solutions to land use and conservation issues that ultimately lead to the recovery of endangered and threatened species."

Under the Habitat Conservation Plan Land Acquisition Program, the Service provides grants to states or territories for land acquisitions associated with approved Habitat Conservation Plans. Grants do not fund any mitigation required of an HCP permittee, but are instead intended to support acquisitions by the state or local governments that complement actions associated with the HCP.

A Habitat Conservation Plan is an agreement between a landowner and the Service that allows the landowner to incidentally take a threatened or endangered species in the course of otherwise lawful activities when the landowner agrees to conservation measures to minimize and mitigate the impact of the taking. A Habitat Conservation Plan may also be developed by a county or state to cover certain activities of all landowners within their jurisdiction and may address multiple species. There are more than 357 Habitat Conservation Plans currently in effect, covering 458 separate species on approximately 39 million acres, with some 407 additional plans under development, covering approximately 100 million acres.

The Habitat Conservation Planning Assistance Program provides grants to states and territories to support the development of Habitat Conservation Plans, through funding of baseline surveys and inventories, document preparation, outreach and similar planning activities.

The Recovery Land Acquisition Grants Program provides funds to states and territories to acquire habitat for endangered and threatened species in approved recovery plans. Acquisition of habitat to secure long-term protection is often an essential element of a comprehensive recovery effort for a listed species.

For more information on the 2004 grant awards for these programs (Catalog of Domestic Federal Assistance Number 15.615), see the Fish and Wildlife Service's Endangered Species Grants home page at http://endangered.fws.gov/grants/section6/index.html.

The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 95-million-acre National Wildlife Refuge System which encompasses 542 national wildlife refuges, thousands of small wetlands and other special management areas. It also operates 70 national fish hatcheries, 64 fishery resource offices and 81 ecological services field stations. The agency enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

Appendix P - Minutes of South Dakota HCP Planning Meeting with USFWS - September 9, 2004

HCP Discussion, September 9, 2004

Attendees:

Carol Aron

Matt Snyder

Paul Coughlin

Clifton Stone

Jack Freidel

Dan McCormick

Scott Larson

Eileen Dowd Stukel

Jim Riis

Dennis Williams

Bridget Fahey

Dave Ode

Below is a list of the commitments for listed species that we discussed at the meeting. I have added some questions that I would appreciate comments on. We are very open to additional suggestions/changes, so please comment on this list and add or remove items as you see appropriate.

Replant cottonwoods at a 4:1 ratio (four cottonwoods planted for every one removed) in appropriate sites.

- are existing planted areas currently monitored? Should we/do we require that the planted trees survive for at least a set number of years?
- if planted cottonwoods are not surviving, should we consider planting other species (burr oak, sycamore, pine, etc.) that might provide habitat for bald eagles in the future?
- could we look into some experiments with localized flooding to try to enhance survivorship of young planted cottonwoods, or as a way to get cottonwoods to germinate in the spring by themselves?

We have already done some cottonwood planting in some locations, i.e. DeGray, are there other leased lands that we can improve for wildlife/listed species?

- what level of commitment are we willing to make to improve habitat on leased lands?
- how long are the leases for?
- how much authority does the Corps have on those lands?

Designate La Framboise Island as a bald eagle "sanctuary." Plant the grassy area with trees and protect existing cottonwoods. Close down parts of the island to visitors as needed so that eagles are not disturbed (e.g. the east end of the

island has been closed in the spring for the last couple of years to avoid disturbing the nesting pair).

Fence (psychological fencing), sign, and monitor least tern and piping plover nesting areas as needed during the breeding season. Areas that are currently used by the birds, at least in some years include Okobojo, Little Bend, and Cow Creek.

- how specific do we want to get in identifying areas that we will fence as necessary (anywhere they nest, in specific identified areas)?
- are there areas that we would not be willing to fence off where the birds might conceivably show up (near boat ramps, specific parts of campgrounds etc.)?
 If we identify these, it would help us to identify how much mitigation we should consider.
- as I understand it, we currently help to protect these areas down to the water's edge, even though that includes Corps land should we state that policy more clearly?
- there seems to be some confusion about law enforcement on those lands that are below the high water mark, we may want to clarify enforcement authority for the COs.

Will maintain existing wildlife habitat

- Are there specific areas that we would like to identify?

To protect pallid take by fishermen, the state has shut down the shovelnose sturgeon fishery.

Boat ramps are signed to inform fishermen to release any sturgeon caught. Should we consider regulations require screening at water intakes to stop larval/small pallids from being sucked in?

What timeframe do we want for the HCP? Perhaps a 10-year HCP with an option to continue if it seems to be working well.

The HCP requires funding assurances. Will the trust fund money be used for mitigation?

Appendix Q – First meeting report of SD Pallid Sturgeon Management Team – December 14, 2004

Attendees: Carol Aron, Herb Bollig, Steve Chipps, Rick Cordes, Eileen Dowd-Stukel, George Jordan, Rob Klumb, Scott Larson, John Lott, Gerald Mestl, Wayne Nelson-Stastny, Mark Rath, Jim Riis, Jeff Shearer, Dane Shuman, Jason Sorensen, Wayne Stancill, Dennis Unkenholz, Gerry Wickstrom, Steve Wilson (on phone for morning)

Comments included from Mark Drobish (Corps) who was not able to attend due to a conflicting meeting.

Next Meeting: Conference Call, March 15, 2005, 10:00 Central Time

Team Composition and Outreach:

The group discussed the team's composition. No Corps representative was present, and the Corps is an obvious player who should participate in the process. Note: Mark Drobish has stated his intention of participating in the future (he had a conflicting meeting this time). General Strock was very knowledgeable in the Missouri River when he had a position relating to it, but has since moved on to a new position. He would be a good person to keep informed. Also, Casey Kruse, John Remus and Ken Stark should be kept informed. The tribes should also be involved in the process.

The team is primarily composed of fish experts; it might also be useful to have input from a hydrologist and a habitat specialist. Jack Erickson, SDGFP, would be a good person to participate (Note: Jack does not have time for much engagement at this time; he might have some more time in a few months, in the meantime we will keep him informed). The Missouri River Futures group is interested in buying land or easements from riverfront landowners and would also be a good group to include.

Population Monitoring:

Nebraska Game and Parks is monitoring from around the Platte River to Kansas City. They have started working in some of the more difficult sections of the river recently, and have been catching pallids, and also chubs, benthic species thought to be associated with pallids. The FWS is monitoring below Fort Randall, and SDGFP just started monitoring below Gavins Point Dam. Ideally, all of the data collection rangewide will be standardized and compiled in one place. The Missouri Department of Conservation has discussed serving as a data repository for native fish data on the Missouri River. It is important to remember that pallids often occur in greatly altered habitats, which is where most of the data are currently being collected. This habitat type may not represent their optimal or preferred habitat compared to a more natural system.

Note: Mark Drobish reports that the Pallid Sturgeon Population Assessment Program is now fully implemented from Fort Randall Dam to the mouth near St. Louis. Segments 5 & 6 are being covering by the FWS (Stancill's Crew)-Fort Randall Reach

Segment 7 covered by the SDGF&P-Gavins Point Dam to Ponca Segments 8 & 9 covered by the Nebraska Game and Parks Commission (NGPC)-Ponca to the Platte and the Platte to the Kansas River

*Segments 10, 11 & 12 covered by Missouri Department of Conservation (MDC)-lower Kansas River and the Missouri River from the Kansas to the Grand River and the Grand to Glasgow.

Segments 13 & 14 covered by the FWS (Columbia, Missouri Fishery Resources Office (FRO)-Tracy Hill)-Glasgow to the Osage and the Osage to the mouth.

*MDC is currently under contract with the Corps to handle the data entry, QA/QC, database management and conduct basic analysis for all segments for the program.

Segments 1-4 (Fort Peck Reach) is currently not implemented. Mark has still not been able to work things out regarding a contract with the Montana Department of Fish, Wildlife and Parks (MTFWP). FWS (Krentz) will cover segment 4-confluence of the Yellowstone River to the headwaters of Lake Sakakawea beginning in the spring of 05 if Mark can find the resources to make this happen.

The program underwent an Independent Science Review conducted by Sustainable Ecosystems Institute and the recommendations were consolidated into a report. The Pallid Sturgeon Population Assessment Team will meet in January (25-27) to incorporate the recommendations and to continue to develop the program (e.g. standardized reporting, Independent Science Review recommendations, etc.)

Flow Test Monitoring:

A flow test is scheduled for Fort Randall/Gavins Point in 2006. It is critical to have testing evaluations ready to try to link pallid sturgeon response to flow changes. That is likely the only way to get the Corps' attention at a high enough level to make a difference. Note: Mark Drobish reports that Doug Latka is working with the USGS (Columbia Environmental Research Center) on this effort. In conjunction with the Scaphirhynchus Conference in St. Louis on January 10th, Doug and the USGS will be providing an overview of this effort. Mark Drobish, Craig Fleming, and Casey Kruse are encouraging this effort to be opened up for input from the biological/science community to develop this along the same lines that the Population Assessment Program and Shallow Water Habitat (SWH) Monitoring Program have been developed.

Bank Stabilization:

The Park Service inventoried the bankline to determine the amount of bank stabilization from Fort Randall to Ponca (excluding the stretch from Running Water to Gavins Point which is not part of their jurisdiction). A report will be ready soon.

Plan Approach:

Dennis noted that the state had developed a strategic plan some years ago which is relevant to the current effort. This effort seems to fit in well with the goals developed

for the strategic plan, and we should keep the state's overall strategy in mind. The plan should focus on habitat, rather than just on the pallid.

The river no longer has access to the high cut banks along most of the riverine stretches, and Wayne Stancill suggested that especially with the infrastructure there, it is not going to be possible to ever reconnect the river to its old floodplain. However, the form and function might be restored somewhat if the river could be reconnected to part of the floodplain and allowed some degree of overbank flow. Using old photographs, it would be possible to identify the old river floodplain and purchase land or easements there to erode into the river and create new terraces. Additional research on amount of sediment and the temperature regime necessary to bring back the functionality of the river would also be useful. We are never going to go back to a bluff to bluff scenario, but it might be possible to restore some of the river's functionality with some lesser amount of floodplain.

Propagation and stocking:

The Gavins Point National Fish Hatchery has developed a repository of fishes from all crosses made since the inception of the propagation program for future broodstock use. They currently have 64 families representing eight year classes. The Pallid Sturgeon Propagation Committee is about to come out with an updated propagation plan. This is a guidance document, not a set of mandates for propagation and stocking. It addresses such issues as zebra mussels, whose larval form was sampled below Gavins Point and Fort Randall Dams during 2003. To ensure that stocked fish do not carry them, fish will be treated with potassium chloride, a solution which has been shown to kill all veligers.

The group discussed whether SDGFP would issue a contingency permit that would allow incidentally-caught pallids to immediately be taken to Gavins Point NFH to be kept until they reach better condition and then be stocked in the lower Missouri River in South Dakota/Nebraska. This could be done with a permit application that follows SDGFP's procedure.

The Corps' 2003 Biological Assessment identified expanding hatchery capabilities to meet the propagation/population augmentation needs of the species relative to recovery. The Corps recognizes that stocking is not a solution to recovery but merely a necessary step to augment a population whose numbers have dropped below the critical threshold for recovery based on natural reproduction.

Currently the entire stocking program relies on the few fish collected in North Dakota in the Yellowstone River and confluence area. These are old fish that will likely not be available for the duration necessary to meet the population augmentation needs of the species. The existing programs (i.e., Population Assessment Crews, Mitigation Monitoring Crews, future SWH monitoring crews) as well as specific focused efforts are needed to capitalize on the opportunities to include wild pallid sturgeon throughout the Missouri River system into the propagation program to maximize the genetics of the progeny that will represent the future of the species. This was a major portion of

the justification for making the Gavins Point National Fish Hatchery (NFH) expansion become a reality. These are all pieces of the puzzle and all of the pieces are critical to a successful end result.

More work needs to be done on the long-term effects of iridovirus on fish that survive the initial outbreak, both stocked and those that remain in the hatchery. There have been outbreaks at both the Gavins Point and the Garrison fish hatcheries, but it seems to be worse at Garrison. The disease is transmitted vertically.

Upper Basin Meeting:

The Upper Basin Workgroup met at the beginning of December in Montana. As defined in the Recovery Plan, the stretch below Fort Randall Dam is considered to be in the upper basin, while the Gavins Point stretch is in the Middle Basin, so South Dakota is included in this group. It would be good if South Dakota sent a representative/had more involvement in that group.

Threats:

The plan should include a threats section, including such topics as: the walleye predation issue, non-natives, zebra mussels, contaminants, and Asian carp.

Plan Components:

The team discussed items that should be included in the plan. Members agreed to develop a draft write-up about various components as per their expertise. Please email these drafts to me/the team by **February 28, 2005** so that the team has time to read them before the next meeting. Identified tasks and people to work on them are below. Thanks!

1. Habitat - all

- -The plan should define what is necessary for the sturgeon and other native benthic fish.
- -What was the pre-dam temperature regime, is temperature important as a cue for reproduction?
- -There doesn't seem to be enough turbidity for reproduction. There is more turbidity below some of the tributaries. How much is necessary?
- -How much shallow water habitat is necessary? The BO called for 20-25 acres/river mile, which will be evaluated to determine if it is sufficient.
- -We are not going to be able to re-create pre-dam conditions, so we should work towards incremental changes and monitor to determine what is required for natural reproduction and recruitment (there is evidence that there has been some recruitment below Gavins Point Dam). Paddlefish are spawning near Verdel, and this may also provide appropriate habitat for pallids.
- 2. Tributaries Dane
 - -Are tributaries important for pallids or for food production?
 - -Would more tracking studies of pallids help?
- 3. Bank stabilization/floodplain habitat Steve Wilson, Gerald Mestl, Mark Rath -Evaluate historic photographs of the Missouri River and its floodplain

- -Define and delineate an area along the river that could be flooded regularly (annually, every 5 years etc.) to restore some floodplain to the river. If elevations of existing structures are available, that might provide more information about what areas to exclude.
- -Work with funding source and landowners to purchase land or easements to allow erosion.
- -Nebraska Game and Parks is already working on this to some extent, but needs the images. The Park Service would also be interested.
- 4. Hatchery Jim, George, Rick, Herb
 - -The existing federal hatcheries are short on space every year. Gavins Point just did some major renovations, but they will continue to be short on space, especially as they keep some fish from every cross and don't want to overcrowd fish because of the increased risk of iridovirus. Other states (Missouri and Montana) are participating in raising pallids at hatcheries, and it may be helpful if South Dakota would raise pallids in state hatcheries (Blue Dog). Dennis Unkenholz had previously expressed concern about the state taking on this federal responsibility. Jim Riis will discuss the possibility with Dennis and Blue Dog Fish Hatchery staff and raise the issue of pallid sturgeon rearing at Blue Dog as an agenda item at the Winter Fisheries Meeting in February. Blue Dog just underwent some major renovations and has provisions for future expansion with the purchase of more equipment.

Note: Mark Drobish comments " I would caution everyone before bringing additional facilities on board to rear pallid sturgeon. In 1998 only 750 fish were stocked in RPMA 2 based on the stocking plan at that time. I would say that the majority of folks working on this effort feel that these numbers were too conservative. Over the past 3 years, the stocking plan numbers have changed each year and today many feel that it is merely a numbers game and is not based on credible science. The FWS (Stancill) recently has taken the lead on putting together a Missouri River Stocking Plan. When completed, this plan should provide the target numbers to be stocked. This target should be compared with the capabilities of the 6 facilities already rearing pallids before adding more hatcheries to the list. The Corps obviously has an interest and concern here. Last year, we put over \$5 million into hatchery facility improvements and I've since been hammered because there isn't a stocking plan that provides the solid target numbers. If once the stocking plan is completed and blessed by the Service, we need more space or facilities to rear the fish, I'll have solid justification to fight for additional resources."

5. Iridovirus - Rick, Herb

-There are many research questions associated with this disease. There is circumstantial evidence to indicate that the virus may be transmitted vertically (parent to progeny via gametes), but there are many variables to substantiate the evidence nor has there been the development of sensitive screening techniques to verify vertical transmission of the virus. It is still a fish health management goal to eliminate the virus in propagated populations. Fish that tested positive are surviving, but we don't know the long-term effects.

- -To our knowledge, it only affects pallids and shovelnose, the closely related paddlefish doesn't seem to be affected.
- -South Dakota has a fish health management plan. This plan may include the plan as an appendix, or parameters from it explaining the criteria for accepting or rejecting fish.
- 6. Public Outreach Chuck Schlueter and Larry Gigliotti
 - -The first year class of pallids released (1997) had dangler tags primarily to alert anglers to release any captured pallids. That seemed to work well there was a lot of awareness among anglers in Nebraska.
 - -It would be a good idea to keep the public informed and interested in pallid issues. This could include ceremonial stocking events, radio and television pieces. FWS has done some segments with Tony Dean.
 - -Boat ramps have signs telling anglers to release all sturgeon. The Corps, coordinating with Steve Krentz, has put together informative signs for boat ramps throughout the Omaha District regarding the Terns, Plovers and Pallids. These signs include the toll free number to report pallid catches (1-888-203-9577).
 - -We need to make sure that we get the word out that there is not a conflict between pallids and gamefish. A habitat approach should benefit both. This could be addressed annually in the Corp's Annual Operating Procedure (AOP) letter, which should also include specific flow recommendations that will benefit pallid sturgeon. At present, this information is not included in South Dakota's AOP letter, mainly because we don't know what specific recommendations to make.
- 7. Sediment Transfer Wayne Stancill

management activities.

- -South Dakota should get more involved in the ongoing discussions. Because of the delta forming in association with the Niobrara River, Lewis and Clark Lake is not functioning like a river. A flushing event would cause a short-term decline in the Lewis and Clark fisheries, but it would likely have long-term benefits for hundred of miles downstream as well as delayed local effects. A flushing experiment in Lake Sharpe several years ago did not appear to accomplish what was promised, but there may not have been a drastic enough flow. In 1997, there was great paddlefish reproduction, presumably as a result of the high flows.

 -Wayne Stancill pointed out that we need to think of the river as a unit, and less like a series of impoundments. Fish are already going through Gavins Point Dam (i.e., moving between segments), and we need to recognize this in our
- -The importance of sediment on pallids is not known, and should be studied.
- 8. Interagency Coordination everyone, especially Scott
 - -Missouri River Recovery Implementation Committee (MR RIC) Scott mentioned that it would be good to have more South Dakota involvement in river-wide issues, including MR RIC, when this group is formed.
 - -To be effective, we must identify and interact with key people within the Corps, including resource personnel like Casey Kruse, people in key positions, such as the ecosystem recovery coordinator, and the leadership in Omaha.
 - -Other groups which should be kept informed Missouri River Natural Resource Council (MRNRC), Mississippi Interstate Cooperative Resource Association

(MICRA), Missouri River Basin (MRBA), Bank Stabilization Coalition, sedimentation group, others?

Miscellaneous Information:

Wayne Stancill will be going to school this January through May. Dane Shuman will be taking his place on the team during that time.

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Appendix R - Elements of five-year contract between SDGFP and Corps of Engineers related to pallid sturgeon and associated fish community assessment for Missouri River

Missouri River Fisheries Program Pallid Sturgeon Monitoring

SDGFP has begun a 5-year contract with the USACE to be a partner in the long-term pallid sturgeon and associated fish community assessment for the Missouri River.

Primary Focus: Long-term pallid sturgeon and associated fish community assessment for the Missouri River.

Objectives

- Document current and long-term trends in pallid sturgeon population abundance, distribution and habitat use throughout the Missouri River system.
- Document survival, growth, and habitat use of stocked pallid sturgeon in the Missouri River system.
- Document pallid sturgeon reproduction and recruitment in the Missouri River system.
- Document current and long-term trends in native Missouri River fish species abundance, distribution and habitat use, with emphasis on the warm-water benthic fish community.

Description and Justification of Monitoring Program

The "2000 Missouri River Biological Opinion" (BIOP) addresses three species that are currently listed as threatened or endangered; the piping plover Charadrius melodus, the least tern Sterna antillarum and the pallid sturgeon Scaphirhynchus albus (USFWS 2000). The pallid sturgeon was added to the endangered species list in September 1990. Although there are several Reasonable and Prudent Alternative (RPA) elements addressing the various species and habitat restoration issues, this document will focus on RPA element VI A, emphasizing the evaluation, survival, movement and distribution of hatchery reared and stocked juvenile pallid sturgeon and VI B, a comprehensive pallid sturgeon population assessment program. This monitoring program was mentioned throughout the Biological Assessment released by the USACE in November of 2003.

Project Area

SDGFP Area of Responsibility: Area 10 - Gavins Point Dam (RM811) to Lower Ponca Bend (RM 750).

The project area encompasses the Missouri River from Fort Peck Dam, Montana at Rivermile (RM) 1771.5 downstream to the confluence of the Missouri and Mississippi Rivers near St. Louis, Missouri (RM 0). The BIOP divides the Missouri River system

into river and reservoir areas and assigns high, moderate or low priority management action to these areas for pallid sturgeon throughout the Missouri River system. The focus of this project will target the high priority management action areas (areas). The "high" priority action areas (Area) include Area 2, (Fort Peck Dam, Montana, RM 1171.5 to the headwaters of Lake Sakakawea, North Dakota, RM 1568), Area 8 (Fort Randall Dam, South Dakota, RM 880 to the Niobrara River, Nebraska, RM 1845), and Areas 10-15 (Gavins Point Dam, South Dakota/Nebraska, RM 811 to the mouth, Missouri, RM 0).

Sampling Seasons

- <u>Sturgeon Season</u>: Fall water temp. < 55° F June 30. Half of sampling prior to Jan. 1/half after Jan. 1. Half of the gill netting effort to be conducted prior to Jan. 1 and half after. The majority of the sampling would take place from March-June (with the exception of the gill netting efforts)
- <u>Fish Community Season</u>: July 1 October 31. Half of sampling July-August/ half of sampling September-October.

Appendix S - Interim Report on the Capture and Monitoring of Pallid Sturgeon in the Missouri River between the headwaters of Lewis and Clark Lake and Fort Randall Dam (RM 825-880)

Prepared by the US Fish and Wildlife Service Great Plains Fish and Wildlife Management Assistance Office Pierre. SD

Abstract

The objectives of this research are to: 1) document current and long term trends in pallid sturgeon population abundance, distribution, and habitat usage; 2) document survival and growth, and habitat use of stocked pallid sturgeon; and 3) document pallid sturgeon reproduction and recruitment From Fort Randall Dam to the headwaters of Lewis and Clark Lake (RM825-880). Attempts were made to capture sturgeon with gill-, trammel-, hoop-, and minifyke-nets, bag seines, benthic trawls, and setlines. A total of 24 pallid sturgeon were captured during the 2004 sampling season in three types of gear: eight in gillnets; 13 in trammel nets, and three on setlines. Benthic trawls, hoop nets, minifyke nets, and bag seines captured no pallid sturgeon. All sturgeon captured were considered hatchery propagated fish due to the presence of passive integrated transponders or based on size of fish captured.

Introduction

Since the 1990 listing of the pallid sturgeon by the US Fish and Wildlife Service many recovery actions have been implemented to expedite the recovery of this species. The action taken by U.S. Fish and Wildlife Service, Great Plains Fish and Wildlife Assistance Office (GPFWMAO) is to monitor hatchery propagated fish within RPMA #3 and determine uncertain life history attributes of these fish. The protocol implemented by the GPFWMAO is a first step in monitoring long term trends in pallid sturgeon abundance, while data on survival, growth, habitat use, reproduction, and recruitment within RPMA #3 will also be obtained.

Methods

In 2004 the U.S. Fish and Wildlife Service, Great Plains Fish and Wildlife Management Assistance Office implemented a sampling protocol that was developed by the Pallid Sturgeon Population Assessment Team. This team represents various state and federal agencies and universities affiliated with fisheries research and management on the Missouri River system. The title of this document is Long-Term Pallid Sturgeon and Associated Fish Community Assessment for the Missouri River (LTPSAFCA) (ACOE 2003). Detailed information regarding the sampling protocol is defined within this document.

The area sampled lies between the headwaters of Lewis and Clark Lake and Fort Randall Dam (RM 825-880). This area is also considered recovery priority management area #3 (Dryer and Sandoval 1993). Recovery Priority Management area #3 was subdivided into segments 5 and 6 following the LTPSAFCA protocol. Segment 5 (RM 845-880) begins immediately below Fort Randall Dam and continues to the

Niobrara and Missouri rivers; segment 6 (RM 825-845) begins at the confluence and continues downstream to the headwaters of Lewis and Clark Lake. This RPMA was divided into two segments based on an aggrading or degrading of the stream bead, and influence of a major tributary. The segments were further divided into river bends and given a number. Within each segment four random and one non-random bend were sampled. The non-random bend in segment 5 was the bend upstream of the Niobrara confluence and in segment 6 the non-random bend was the bend at the Niobrara Confluence. New bends were chosen for each season.

Two sampling seasons named, the sturgeon season and the fish community season, were established based on water temperature (12.8°C). The sturgeon season began when water temperature fell below 12.8°C, while the fish community season began when temperature raised above 12.8°C. These seasons allowed for the deployment of temperature restricted gears and gears targeting particular life stages and habitats used by specific fish.

Multiple sampling gears were deployed to access the various habitats and life stages of pallid sturgeon and the fish community. These gears include gill nets, trammel nets, hoop nets, minifyke nets, bag seines, benthic trawls, and setlines. The specific dimensions and design of these gears are listed in the LTPSAFCA protocol (ACOE 2004). Each gear was deployed in a series of macro- and mesohabitats to ensure equal representation throughout each bend. Habitat definitions are found in the ACOE (2004).

Results

Sampling began on April 12, 2004 and ended on October 3, 2004. A total of 25 pallid sturgeon were captured during the 2004 sampling season. Six pallid sturgeon were captured in segment 6 while 18 were captured in segment 5. Of the 25 pallid sturgeon captured, eight were sampled in gill nets, 13 were caught in trammel nets, and three were caught on setlines. No pallid sturgeon were captured in benthic trawls, hoop nets, minifyke nets, and bag seines. Fish captured represented the 1997, 1998, 1999, and 2002 year classes. Four fish captured contained no passive integrated transponders (PIT) but were of comparable size to those fish stocked from the 1998 and 1999 year class and therefore, were considered hatchery propagated fish. These four fish had PIT tags reimplanted for future identification.

Habitat measurements were taken at each capture location. Pallid sturgeon were captured primarily over sand substrate were depth ranged from 1.6-6.4 m and velocities ranged between 0.10-0.78 m/s.

Growth was computed for recaptured fish. Fish from the 1997 year class on average grew 1.95 mm/ 30 days and gained 1.92 g/30 days. Fish from the 1998 year class on average grew 1.63 mm/30 days and gained 1.58g/30 days. Fish from the 1999 year class on average grew 4.76 mm/ 30 days and gained 4.08 g/30 days. Fish from the 2002 year class on average grew 9.45 mm/ 30 days and gained 6.97 g/30 days. No natural recruitment of pallid sturgeon was document with our 2004 sampling.

Literature Cited

Army Corp of Engineers (ACOE). 2003. (Draft) Long-Term Pallid Sturgeon and Associated Fish Community Assessment for the Missouri River. Army Corp of Engineers, Threatened and Endangered Species Section, Yankton, SD.

Dryer, M.P. and A.J. Sandoval. 1993. Recovery Plan for the Pallid Sturgeon (Scaphirhynchus albus). U.S. Fish and Wildlife Service, Denver, CO.

Appendix T – Sample text from Missouri River management planning website (http://www.sdgfp.info/Wildlife/WildlifePlans/Index.htm)

South Dakota Wildlife Management Plans for Threatened or Endangered Species that live along the Missouri River

In 2002, the US Army Corps of Engineers transferred approximately 14,000 acres along the Missouri River to the State of South Dakota. Eventually, 91,178 wildlife and recreation acres will be transferred to the state. These lands are prime recreation sites, providing areas for camping, birding, hunting and fishing, as well allowing increased boating access. The transferred lands are also important to many wildlife species, including four on the federal and state threatened or endangered species lists; the bald eagle, least tern, piping plover, and pallid sturgeon.

Since the land has been transferred to South Dakota, SD Game, Fish and Parks has primary responsibility for managing endangered species on those lands. The State, along with the US Army Corps of Engineers and the Fish and Wildlife Service, developed an agreement to ensure that these species continue to be protected under state management. South Dakota is committed to creating and enhancing habitat for the listed species along the Missouri and throughout the state. South Dakota Game, Fish and Parks is developing a set of management plans for the four listed species that live along the Missouri. This website was developed to keep the public informed of the plans as they are written and to provide an effective means for public involvement.

If you have comments or questions, click <u>here</u>.

(Website provides links to specific South Dakota planning accomplishments for bald eagle, least tern, piping plover, and pallid sturgeon.)

Sample link:

Bald Eagle

Haliaeetus leucocephalus

Only 30 years ago, the bald eagle, our national symbol was near extinction. Shooting and environmental contamination, particularly from the pesticide DDT, led to widespread nest failure and death of adult birds. With the banning of DDT and the protection afforded under the Endangered Species Act, the bald eagle population has increased dramatically nationwide. The bald eagle was proposed for <u>delisting</u> (removal from the federal Endangered Species List) in 1999, and the species is expected to be delisted within the next two years. The bald eagle is a state threatened species in South Dakota.

South Dakota's other eagle species is the golden eagle, which nests in western South Dakota, often on buttes that overlook grasslands. Golden eagles are dark brown all over. They look similar to juvenile bald eagles, and the two can be easily confused.

For many years, the bald eagle was considered only an occasional visitor to South Dakota, and was not known to nest in the state at all. Today, the bald eagle is a year-round resident in South Dakota. Since the first nest was reported in 1994, there have been approximately 35 nests located in the state. Nests are generally built in the largest tree in the area (generally a cottonwood in South Dakota) with a clear flight path to water. Most nests are along the major rivers, but an increasing number of nests are being constructed near ponds and other smaller water bodies. Additional unreported nests likely exist in the state. If you would like to report an eagle nest, click here.

This spring (2004), SDGFP worked with the US Fish and Wildlife Service, the National Park Service, and Nebraska Game and Parks to perform aerial surveys for all of the active bald eagle nests in the state. As of the end of April, there were 32 active bald eagle nests in South Dakota or on the Nebraska side of the Missouri River along the shared river boundary. Click here for a map of all occupied bald eagle nests as of the end of April. We will be checking each nest to determine success as the season progresses (many thanks to our volunteers), so look for an updated map of successful nests in the fall.

In winter, bald eagles congregate in areas where water remains ice-free and food is plentiful, often in the tailrace areas below the dams. Although they feed primarily on fish and wounded waterfowl, eagles are opportunistic feeders, and will scavenge on carcasses and other food as available. Stands of mature trees are very important for bald eagles in winter, as they spend much of the day perched in branches of large trees overhanging water waiting for an opportunity to feed. At night, especially in extreme weather, eagles roost communally in one or two large trees that provide some protection from the elements. Favorite night roost trees are often located within a large forested area that provides protection from severe cold and strong winter winds. Eagles are very sensitive to human disturbance, so winter roosting areas are often closed to certain activities in the winter months. Click here for a map of wintering bald eagle sites in South Dakota.

Questions or comments? Click here.

References:

Hansen, A.J., M.V. Stalmaster, & J.R. Newman. 1981. Habitat characteristics, function, and destruction of bald eagle communal roosts in Western Washington. pp 221-229. in R.L. Knight, G.T. Allen, M.V. Stalmaster & C.W. Servheen, eds. 1980.
Proc. Wash. Bald Eagle Symp. The Nature Conservancy, Seattle, WA.

Martell, M. 1992. Bald eagle winter management guidelines. The Raptor Center, University of Minnesota, St. Paul, MN.

USFWS. 1983. Northern states Bald Eagle recovery plan. Department of the Interior. Denver, CO. 116 pp.

Appendix U – Information items published in SDGFP news release packages and various newspapers

SD Game, Fish and Parks Weekly News Release Package

February 13, 2004

- 2004 APPLICATION DEADLINES
- MEMORIAL DAY WEEKEND CAMPING RESERVATIONS OPEN FEB. 28
- REMINDER ABOUT MILITARY HUNTING OPPORTUNITY
- HUNTING AND BOATING SAFETY COORDINATOR NAMED
- VIEW WINTERING BALD EAGLES IN MISSOURI RIVER STATE PARKS
- BADLANDS NATIONAL PARK CONDUCTING COYOTE STUDY
- 2004 APPLICATION DEADLINES

VIEW WINTERING BALD EAGLES IN MISSOURI RIVER STATE PARKS

PIERRE - In South Dakota, winter is the best time to view the large numbers of bald eagles that roost in state recreation areas below the Missouri River dams.

Bald eagles concentrate below the large Missouri River dams, where the birds take advantage of open water and waterfowl concentrations. Eagles can be found and watched below Gavins Point Dam at Chief White Crane Recreation Area, Fort Randall Dam at Randall Creek Recreation Area, Big Bend Dam and Oahe Dam at Oahe Downstream Recreation Area.

Recent winter counts indicate that approximately 140 bald eagles are currently using these areas, with the majority of eagles on the lower river below Fort Randall Dam and Gavins Point Dam.

Early morning and late afternoon are the best viewing times, though eagles can be seen any time of the day. As spring approaches, watch for the eagles' pair bonding displays, as eagle mates lock talons and tumble through the air.

As you visit recreation areas below the dams, remember to follow the rules of eagle watching:

- Bald eagles are sensitive to human disturbance. If birds are disturbed at a nest site, the adults may abandon their eggs or young in the nest. The pair may not renest or produce any young until the following year. Watching eagles during the winter has less impact on the birds, especially if done in a safe and responsible way.
- Do not disturb or harass wintering eagles as they are already stressed by the cold and scarcity of food. Scaring eagles from their food could deprive them of energy they need to maintain their body temperature through the cold night. Unhealthy eagles generally do not successfully raise young the following spring.
- Stay at least 300 yards or further from perched eagles, especially during severe weather.

- Stay in your vehicle when eagle watching or use some other obstruction, such as a blind or tree.
- When visiting a recreation area to view the eagles, please observe any closings.
 Areas in parks below the dam may be closed to vehicle traffic to leave eagles undisturbed.

Governor Mike Rounds declared Feb. 23-29 as Bald Eagle Awareness Week in South Dakota. Events include an evening program at the SDGFP Outdoor Campus in Sioux Falls on Feb. 26, an evening program at the Pierre Mall on Feb. 27 and three programs at the Ramkota Inn in Pierre on Feb. 28. The bald eagle steering committee is also sponsoring a bald eagle poster contest for South Dakota sixth graders, with entries due on Feb. 18. Find more information about eagles and Bald Eagle Awareness Week by visiting http://www.state.sd.us/doa/das/bead/beadmenu.htm.

More information on South Dakota state parks and recreation areas can also be found online at www.sdgfp.info/Parks or by calling (605) 773-3391.

-GFP-

Friday, February 20, 2004, Pierre Capital Journal

Bald eagles returning to La Framboise

By DORINDA DANIEL

Capital Journal Staff

Game, Fish and Parks officials are hoping for a better outcome this year for a pair of bald eagles trying to nest on La Framboise Island.

Last year, a pair of bald eagles built a nest in a cottonwood tree toward the far east end of La Framboise Island. The trail near the nest was blocked off by GF&P in hopes the pair would lay eggs, hatch them and raise eaglets.

"They abandoned the nest. We think it may have been due to disturbance – too many people walking by. We had problems with people tearing down signs or disregarding them and walking down the path," said Doug Backlund of the S.D. Department of Game, Fish and Parks.

Bald eagles are sensitive to human disturbance. It's recommended that people stay at least 300 yards away from perched eagles.

A pair of bald eagles is again trying to use the nest on La Framboise Island.

GF&P has blocked off a walking trail from the beginning of the prairie loop to the tip of the island.

"We moved the signs farther back to give them a little bit more room and encourage them to stay," said Pat Thompson of GF&P.

Boaters are also encouraged to stay back from the eagles.

Eagles need several things for nesting: a large tree, a source of food, and peace and quiet.

They usually nest near rivers or lakes so they can be close to fish, a favorite food. The nest, or aerie, is a large stick structure built near the top of a tall tree.

Female bald eagles usually lay one to three eggs by early to mid-March. During the 35-to 40-day incubation period, the female spends most of the time on the nest. The male brings food to the female and helps sit on the eggs.

When the eggs hatch, the eaglets are covered with thick brown down. They start growing dark brown feathers when they are about 3 weeks old. The eaglets are ready for their first flight by 3 months of age. They stay with the adults for approximately eight weeks after leaving the nest.

If bald eagles are disturbed at a nest site, they may abandon their eggs or the young in the nest.

It is estimated there are 30 active nests in South Dakota, Backlund said.

During a bird count earlier this winter, 89 eagles were counted near Oahe Dam, Backlund said. They can hunt for fish and injured waterfowl in the open water of the Missouri River and roost in cottonwood trees.

Wednesday, February 25, 2004, Pierre Capital Journal

Author pens eagle book for children By DORINDA DANIEL Capital Journal Staff



Charlene Bessken wrote the book, "Eagles for Kids," while she lived in Wisconsin. She now lives in Pierre and works for the U.S. Fish and Wildlife Service. She will be at Bald Eagle Awareness Days programs on Friday night and Saturday. Programs about bald eagles and other birds of prey will be presented by The Raptor Center at 6:30 p.m. Friday at the center court of the Pierre Mall and at 10:30 a.m., 12:30 p.m. and 2 p.m. at Amphitheater II at the Ramkota. Entries in a bald eagle poster contest will be displayed at the mall and/or the Ramkota, and an open house will take place from 1-3 p.m. Saturday at the Oahe Wildlife Center as part of Bald Eagle Awareness Days activities. (Capital Journal photo by Dorinda Daniel)

A Pierre woman has written the book on bald eagles.

Charlene Bessken is the author of "Eagles for Kids."

"It's interesting for kids to look at. It's a coffee-table book for kids," Bessken said.

Young people and not-so-young people will learn why bald eagles acquired the name bald, what they eat, where they live and other facts about the birds; learn the meaning of words such as raptors and aeries that are associated with bald eagles; and see photographs of bald eagles.

Bessken works for the U.S. Fish and Wildlife Service in Pierre and is a member of the Bald Eagle Awareness Days committee that coordinates programs this week in Sioux Falls and Pierre meant to increase people's awareness of bald eagles.

Bessken's interest in the bird that is the national symbol was sparked when she took biology courses in college. She has a degree in wildlife ecology from the University of Wisconsin-Madison.

"I think part was they were struggling to come back or stay alive. People were shooting them and poisoning them. DDT was still a problem. That made it interesting – there were so many problems there," Bessken said.

As a non-game biologist with the Wisconsin Department of Natural Resources, Bessken worked with bald eagles, ospreys and peregrine falcons. She coordinated statewide efforts to protect and reintroduce these endangered species.

"I probably first started working with eagles in 1982. I tried to learn everything I could about them," Bessken said.

She convinced volunteers in Wisconsin to look for eagles and report what they saw.

She started eagle watching days because she wanted the people to learn about eagles.

"Probably the most fun I had was when we had our eagle watching days. When people would see eagles for the first time, their eyes would get big. They'd say, 'Wow! They're huge!" Bessken said.

During one of the eagle watching days, a book publishing company displayed books and videos from its series about birds. Bessken suggested that a book on eagles be included in the series, and was given permission to write it. The result was "Eagles for Kids," published in 1991.

"What I found fascinating about eagles is they are a big bird (they can have a wingspan of 7 to 8 feet), that they don't get their white head and white tail until they are 4 or 5 years old, and that they can only be found in North America – no place else in the world," Bessken said.

The need to educate people about bald eagles still exists.

"Eagles still get shot. Some people call them chicken hawks," Bessken said.

It is illegal to shoot bald eagles.

A pair of bald eagles is trying to nest on La Framboise Island.

"If people see nesting eagles, they should stay back 300 yards. They should give them space," Bessken said.

If people see a bald eagle's nest on private land, they should call USFWS at 224-8693.

"We like to keep track of where they are," Bessken said.

During Bald Eagle Awareness Days activities in Pierre on Friday and Saturday, young people and adults will have the opportunity to see and learn first-hand about eagles and other birds of prey.

Educators from The Raptor Center at the University of Minnesota will present a birds of prey program to the public at the Pierre Mall beginning at 6:30 p.m. Friday.

The programs will also be presented at 10:30 a.m., 12:30 p.m. and 2 p.m. Saturday at Amphitheater II at the Ramkota.

Special activities for children are planned during the programs at the Ramkota.

Oahe Wildlife Center will have an open house from 1 to 3 p.m. Saturday. The center cares for injured raptors and is located next to the Missouri River Fisheries Center off S.D. Highway 1806 near Oahe Dam.

Bessken will be at the birds of prey shows at the Pierre Mall and at the Ramkota.

Although out of print now, hard-cover and soft-cover editions of "Eagles for Kids" are available from Bessken. People may call her at work at 224-8693 ext. 31 to order a copy of the book.

SD Game, Fish and Parks Weekly News Release Package

March 12, 2004

- DEPARTMENTS SEEKING NESTING INFORMATION ABOUT BALD EAGLES
- STATE PARKS PRIME PLACES FOR SPRING BIRDWATCHING
- SPECIAL BUCK APPLICATION AVAILABLE, ONLINE TOO!
- PHEASANT SEASON PROPOSED WITH EXTENDED END DATE
- WILDLIFE DIVERSITY SMALL GRANTS AWARDED
- PROPOSALS FOR 2004 ELK SEASONS
- BIGHORN SHEEP AND MOUNTAIN GOAT SEASONS

DEPARTMENTS SEEKING NESTING INFORMATION ABOUT BALD EAGLES

PIERRE – As the bald eagle nesting season begins, the South Dakota Department of Game Fish and Parks (GFP) and the U.S. Fish and Wildlife Service (USFWS) are trying to learn more about bald eagle nesting in South Dakota.

"Biologists will use aerial surveys along the major rivers throughout the state and shelter belts in the East River area to try to locate as many bald eagle nests as possible," said Carol Aron, South Dakota Missouri River Endangered Species Coordinator from USFWS. "We would appreciate public assistance with this project."

Nests are located throughout the state, often on private lands. The public is asked to report any sightings of bald eagle nests. As the bald eagle population continues to rise, some pairs are moving away from the major river systems to nest on smaller waterbodies or in shelter belts near fields. Both departments would appreciate hearing from landowners who know of bald eagle nests on their property.

"If an eagle chooses to nest on your property, you are obviously already managing the land well for wildlife species," Aron noted. "The agencies will not ask you to change current management practices, and you can change land use as you wish, as long as the actual tree the bald eagle nest is in remains undisturbed. The agencies are simply trying to find out how many nests there are in South Dakota and to determine how many adult bald eagle pairs successfully raise young to fledging age. Any help would be greatly appreciated."

For many years, there were no known bald eagle nests in South Dakota. In 1992, a nest was discovered, and 35 nests have been documented in the state since then. Bald eagles build a large stick nest in the tallest tree in the area, generally near water. They build on to the nest every year until it falls in a storm or under its own weight. One nest in Ohio was estimated to weigh two tons when it fell! Eagle pairs often build one or more satellite nests near their primary nest.

In South Dakota, bald eagles begin nesting activities in late February to early March. The eggs hatch after about 35 days, and the young leave the nest 10 to 12 weeks later, although the parents continue to feed them for several more weeks. Juvenile bald

eagles are blackish-brown all over, not getting the characteristic white head and tail feathers for four to five years.

Reports can be made to Doug Backlund with GFP at 605-773-4345 or your local GFP Conservation Officer.

-GFP-

March 13, 2004, Rapid City Journal

Help needed in eagle search

PIERRE (AP) — Wildlife officials are asking for the public's help in finding bald eagle nests.

Biologists plan to use aerial surveys along waterways and shelterbelts to find as many nests as possible, the U.S. Fish and Wildlife Service said. Some bald eagles are moving away from the area around major rivers and are nesting near smaller bodies of water.

Experts simply want to know how many bald eagle nests exist in South Dakota and determine how many eagle pairs raise their young to fledgling age.

"We would appreciate public assistance with this project," Carol Aron, South Dakota Missouri River endangered species coordinator for the Fish and Wildlife Service said.

For years, there were no known nests in South Dakota. One was found in 1992, and 35 have been documented since.

Nesting usually starts in late February to early March. Bald eagles build on to their nests every year until the nests fall in a storm or under their own weight.

SD Game, Fish and Parks Weekly News Release Package

March 26, 2004

- PARKS REOPEN AFTER BALD EAGLE ROOSTING
- TURN IN POACHERS HOTLINE BEEN BUSY
- PRAIRIE POTHOLE REGION TO RECEIVE \$21 MILLION FOR HABITAT ACQUISITION
- TEACHERS INVITED TO GO WILD IN CUSTER STATE PARK
- SPRING ARRIVES WITH HELP FROM FORT SISSETON STATE PARK

PARKS REOPEN AFTER BALD EAGLE ROOSTING

PIERRE - Recreation areas located immediately below the dams on the Missouri River reservoirs will soon reopen to vehicle traffic and camping. Since last fall, these parks have been closed to leave roosting bald eagles undisturbed.

The following areas are reopening:

- Oahe Downstream Recreation Area campgrounds, near Pierre, on April 1
- Randall Creek Recreation Area campgrounds, near Pickstown, on May 1
- Chief White Crane Recreation Area, near Yankton, on April 1

Bald eagles typically spend their winters below the Missouri River dams where they are able to catch fish and prey on waterfowl attracted to the open water. Game, Fish and Parks officials closed these areas to camping and vehicle traffic. If disturbed, the bald eagles may abandon their roosts.

These three parks are the only South Dakota state park campgrounds that close during the winter.

For informational information on bald eagles in state parks, please visit the South Dakota state park website at www.state.sd.us/gfp/sdparks/eagles.htm.

-GFP-

Sat. April3 Yankton Daily Dakotan vankton.net

DOOR DIGEST

Parks Reopen After Bald Eagle Roosting

Recreation areas located immediately below the dams on the Missouri River reservoirs are reopening to vehicle traffic and camping. Since last fall, these parks have been closed to leave roosting bald eagles undisturbed.

Oahe Downstream Recreation Area campgrounds, near Pierre, and Chief White Crane Recreation Area, near Yankton, reopened Thursday. Randall Creek Recreation Area campgrounds, near Pickstown, will reopen May 1.

These three parks are the only South Dakota state park camp-

grounds that close during the winter.

Bald eagles typically spend their winters below the Missouri River dams, where they are able to catch fish and prey on waterfowl attracted to the open water.

Game, Fish and Parks officials closed these areas to camping and vehicle traffic. If disturbed, the bald eagles may abandon their

roosts.

For more information on bald eagles in state parks, visit the South Dakota state park Web site at www.state.sd.us/gfp/sdparks/eagles.htm.

Thursday, April 22, 2004, Pierre Capital Journal

Eagles call area near Pierre home

By MARY GALES ASKREN Capital Journal Staff

Although they will need binoculars, area residents currently have the unique opportunity to view a pair of bald eagles nesting, according to wildlife biologist Doug Backlund with the state Department of Game, Fish and Parks.

"The nest was built five years ago, but eagles have never nested in it before," he said.

The nesting eagles are visible from the historical marker site at the top of the De Grey hill 20 miles east of Pierre on S.D.

Highway 34. The nest – a large stick structure in a dead cottonwood in the reservoir – is clearly visible among the smaller nests used by cormorants and great blue herons, according to Backlund.

"From the top of the hill, I can see a female in the nest incubating ... and the male was setting on a dead tree near the nest," he said. "That's a pretty good indication that they probably have eggs in there, which should be hatching any day now."

Earlier this spring a pair attempted to nest on La Framboise Island. Even though hiking trails on that portion of the island were closed, the pair abandoned the nest. Backlund said that a number of factors may have contributed to this.

"Sometimes they may build a nest and not use it the first year and come back the second year and add a little more to it and not lay any eggs," he said. "They get used to the site and get used to each other. Eagles generally mate for life."

This year, 32 active nests have been identified statewide. Prior to 1992, nests had not been found in South Dakota for more than 100 years, according to Backlund. That year, nests were found at Sand Lake National Wildlife Refuge and Karl Mundt National Wildlife Refuge.

While an estimated 100 eagles winter in the Pierre area, nesting eagles area is a relatively new development. However, the habitat is suitable, according to Backlund.

"They need big trees to build their nests in because they build these huge stick nests that can weigh hundreds of pounds," he said. "Cottonwoods that grow along the river bottom are perfect."

In addition, the Missouri River provides a food supply. The eagles also need an area in which they will not be disturbed.

"They are likely to abandon the nest if they get disturbed," Backlund said. "We recommend that people stay at least a quarter-mile away from a bald eagle nest."

Leader

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Sioux Falls, South Dake

SOUTH DAKOTA

Bald eagles coming to roost

Birds fare better as threat of DDT has been lifted

BY ALAN VAN ORMER

For the Argus Leader

Bald eagles are making a comeback in South Dakota.

"For many years, there were no bald eagles nesting in the state," said Carol Aron, who tracks the birds' welfare.

Now, the state has about 35 nests a year. The change might result from attention the broadwinged raptor has been receiving. It also relates to years of environmental recovery since the government banned the insecticide DDT.

"Two years ago, they were endangered. Now they are a federally threatened species," said Doug Backlund of the South Dakota Natural Heritage Program. "I think eagles are definitely making a comeback. We may have more bald eagle nests now than we did before people showed up here. Explorers very rarely mentioned bald eagles when they passed through South Dakota."

Nationwide, the numbers are up just about everywhere, said Backlund, whose program provides a database on rare, threatened and endangered plants and animals in South Dakota.

That's true locally as well, said Aron, who works with the state Department of Game, Fish and Parks and the U.S. Fish and Wildlife Service to develop man-



DOUG BACKLUND / FOR THE ARGUS LEADER

Baid eagles have made a comeback in South Dakota. For many years, no nests were found in the state. This year, 32 nests have been identified along the state's major rivers and shelterbelts.

agement plans for endangered species along the Missouri River. She has found 32 active eagle nests this year by flying along rivers and shelterbelts. The aerial surveys are due to wrap up this week, so the number might go up a little.

"Eagles traditionally nest near water, but we've been getting more and more reports of eagles in shelterbelts away from major water sources," Aron said. "It may be that with more eagles in the state, some arc simply having to find territories away from the rivers."

Lisa Gelvin-Innvaer of the Minnesota Department of Natural Resources continues to see more nests in the southwest part of her

"This bursting of nesting activity may be a spillover from central Minnesota just to the north," Gelvin-Innvaer said. "We're also

learning about more nests al tributaries to the Minnesota er, primarily in south-central? nesota."

Gelvin-Innvaer said that ban on DDT has helped ea and other birds of prey. "Law protect eagles and their nes habitat also have been a key tor," she said.

DDT was sprayed across United States in the 1950s 1960s for insect control. It banned in 1972.

"That was the biggest prol before the bald eagle was fe ally listed," Backlund said." was causing eggshells to be thin, and eggs were crac before they could hatch."

The insecticide's ill ef accumulated over the years.

"It is good to keep all o pieces of the environment to er if you can," Backlund sa think the recovery of the eagle is more of an indicato even species below the eag the food chain are prof healthier now."

However, there are continuous threats to long-term conservincluding habitat loss, derment along lakes, wetlands, and streams, contaminant disturbance near nest sites.

"Overall, bald eagles are able indicators of environn health, not just for wildlife be humans as well," Gelvin-In said. "The sight of an eagle ing above is still precious many, but fortunately no I so rare." Monday, May 31, 2004, Rapid City Journal

Survey finds 33 bald eagle nests

SIOUX FALLS (AP) - A spring survey found 33 bald eagle nests in South Dakota, a dramatic turnaround for a bird once on the endangered species list and not known to nest in the state only 13 years ago.

Not all the nests will produce young. Some may be abandoned by the adults. In some cases, the nest, which can weigh as much as 1 ton, may be too much for the tree to hold and will collapse, destroying eggs or the young.

But eaglets have been found in some nests already, and follow-up surveys are planned to determine the hatch success rate, according to Carol Aron, the Missouri River endangered species coordinator for the U.S. Fish and Wildlife Service in Pierre.

The nest count was a combination of aerial surveys and reports from the public. Nests are usually built in trees near water and average two eggs. The young start to fly in late June or early July.

A midwinter survey of bald eagles is taken each year in the 48 contiguous states. There were 140 bald eagles counted in South Dakota this year, although the number can vary greatly from year to year depending on the weather in the region. The 2002 survey counted 234.

The open water below the Missouri River dams is a winter attraction for eagles that feed on fish or injured waterfowl and may not find open water in other states.

One of the management tools to help bald eagles is to plant cottonwood trees, Aron said.

"They use them for their nests when they get to be 50 to 70 years old. They prefer trees with horizontal branches and they tend to prefer dead ones because it's easier access in and out." she said.

People should stay a half-mile away from active nests to keep from disturbing the eagles, Aron said.

Surviving the first year can be difficult when eagles are learning to fly and to find food, she said.

Various factors reduced the nation's bald eagle population to 417 known breeding pairs by 1963 and the eagle was placed on the endangered species list. By 1995 it had recovered enough to be reclassified as a threatened species.

There are more than 7,678 breeding pairs now and the Bush administration plans to remove it from the threatened list as well.

SD Game, Fish and Parks Weekly News Release Package

September 1, 2004

- Remember State Parks This Fall
- General CRP Sign-up To Be Held Aug. 30-Sept. 24
- Bald Eagle Nesting Success
- Hunting Atlas And Handbook Hardcopies Available At State Fair
- Dove Season Open, Remember Special Regulations
- Custer State Park Hosts Annual Buffalo Roundup and Arts Festival
- History Comes To Life At Beaver Creek Nature Area
- July/August Issue of SD Conservation Digest Available

Bald Eagle Nesting Success

PIERRE, S.D. – Bald eagles in South Dakota enjoyed a banner year in 2004. The Department of Game, Fish and Parks reports that 20 bald eagle pairs were confirmed to have fledged a total of 34 eaglets. Bald eagles usually lay two eggs, but often only one survives.

"This was a very good year for eagles, with many nests raising two young per nest," said Carol Aron, a biologist for GFP. "One nest actually fledged three young, which is almost unheard of for bald eagles."

Game, Fish and Parks, the U.S. Fish and Wildlife Service, and the National Park Service teamed up this spring to try and locate and monitor all of the bald eagle nests in the state. Six new nests were found. Then volunteers monitored them throughout the summer to find out if the nest was successful and how many young survived.

Bald eagles generally nest near large water bodies, but some of the new nests were found in shelterbelts several miles from water. "With more eagles nesting in South Dakota, they may need to branch out away from traditional nesting areas to find an unoccupied territory," Aron said. "The young that hatched this year will not breed for five or six years. But with successful years like this one, we can expect to find more bald eagle nests throughout the state in the future."

The agencies will continue to monitor bald eagles in future years to better understand the bald eagle population. "We know there are more nests out there that we didn't find this year," Aron said. "There's at least a couple on the Cheyenne River, where we saw newly fledged young this spring but were unable to locate the nests."

According to Aron, landowner cooperation was a key to the monitoring effort. "We had great cooperation from landowners, both in helping us locate nests on their property and assisting with monitoring."

Landowners are encouraged to report bald eagle nests to GF&P by calling 605/773-2745 any time of the year. "Winter is often the best time to find nests," Aron said. "Leaves are off the trees and the large nests stand out against the sky."

Bald eagles are on the federal endangered species list as a threatened species. According to Aron, they have been proposed for taking off that list, and it is expected that the U.S. Fish and Wildlife Service will remove them.

-GFP-

Tuesday, September 07, 2004, Pierre Capital Journal

Officials say bald eagles had successful year in S.D.

By MARY GALES ASKREN Capital Journal Staff

One of the bald eagle parents will often remain close to the nest after eggs have hatched to provide shade for young eaglets. They will continue to feed their young, even after they leave the nest, until the young are able to forage for themselves.

A pair of binoculars or a spotting scope would have enabled individuals in the Pierre area to watch a pair of bald eagles fledge two eaglets this year, according to wildlife

biologists with the state Department of Game, Fish and Parks.

"It's amazing because the nest is huge, but – it's quite deep – when the young lay down in there, it's hard to see them. And then you'll see them popping their little heads up," said Carol Aron, who is involved in monitoring bald eagles in South Dakota.

The pair nested in a dead cottonwood tree which was observable from the top of De Grey hill east of Pierre on S.D. Highway 34. By early July, the young eagles were ready to leave the nest.

"They sort of hang out in that area another few weeks. The parents will continue to feed them and they'll fly. They won't necessarily go back to the actual nest, but they'll stay in trees right nearby for several weeks," Aron said.

For the first time this year, bald eagle populations are being monitored in South Dakota by locating and monitoring nests, she said. The project is a collaborative effort among GF&P, the U.S. Fish and Wildlife Service, and the National Park Service.

As a result of this effort, six new nests were located in the state this year. Aron said other nests exist which have not been located.

"There's at least a couple on the Cheyenne River, where we saw newly fledged young this spring, but were unable to locate the nests," she said, in a press release.

As a result of locating and monitoring nests, GF&P was able to confirm that 20 bald eagle pairs fledged a total of 34 eaglets this year. This indicates that many pairs raised two young, which is unusual. While bald eagles commonly lay two eggs, often only one eaglet will survive.

"One nest actually fledged three young, which is almost unheard of for bald eagles," Aron said.

She said this is probably due to a readily available food supply. When food is sparse, a bald eagle pair may not feed both eaglets.

"If there's not enough food, they'll feed the one that hatches first, which is bigger, and then the other one will die," Aron said.

She said that it is "pretty much inevitable" that the pair of bald eagles which successfully nested near De Grey will return. A pair is usually faithful to a site if they have been successful. If they have a secondary nest, it will be in the same area, according to Aron.

Another bald eagle nest has also been located on La Framboise Island. That nest was abandoned this year, but Aron believes a pair may successfully nest there in the future despite the amount of traffic in the area.

"There are nests in Florida that are literally in people's backyards that are successful, so they're not as sensitive as we used to think they are," she said.

For those who want to watch a pair of bald eagles raise their young next year, Aron recommends beginning to keep an eye on the nest in March or April.

"About April, they'd start working on the nest, adding twigs to it and grass and so forth. They build on to it every year," she said.

By April, some bald eagles may be sitting on their eggs, which hatch in approximately 34 days. This year, the eggs hatched in early May. The eaglets then remain in the nest between nine and 14 weeks.

"A lot of times the parents will be right near the nest, especially when they're young. If it's hot, they'll be keeping them cool by shading them or keeping them warm, and they'll be coming in with food. You can actually see them feeding the young," Aron said.

The nest near De Grey hill is an especially good one to watch with binoculars or a spotting scope, she said, because the historical marker is far enough from the nest so the eagles are not disturbed and it is above the nest, so the viewer can see into the nest.

By the time the young fledge, they are nearly the size of an adult bald eagle, but are not self-sufficient.

"They start to fly and they're not very good at flying and they're not very good at foraging, at killing stuff or finding food to eat, so the parents will keep feeding them for a few weeks," Aron said.

It will be five or six years before the young bald eagles have the white head and tail that mark the mature bald eagle. They can still be identified by their size and by the shape of their bill.

A combination of young and mature bald eagles can be seen near the Oahe Dam during the winter months, Aron said.

Because migration habits of the eagles seen in the Pierre area have not been studied, biologists do not know whether the eagles which nested this spring also winter in the area. A banding study would be needed to determine that, Aron said. At present, one is not planned.

Bald eagles are currently on the federal endangered species list as a threatened species, but the U.S. Fish and Wildlife Service is expected to remove them from the list.

However, GF&P will continue to monitor the raptors to better understand the population. Aron asks that anyone who locates a nest contact her at (605) 773-2745.

"Winter is often the best time to find nests," she said. "Leaves are off the trees and the large nests stand out against the sky."

SD Game, Fish and Parks Weekly News Release Package November 1, 2004

- DeSmet Man Honored For His Work With Recreational Trails
- Canvasback And Pintail Seasons Close Nov. 2 In Most Areas
- Remember To Unload, Encase Firearms When on ATVs
- Bald Eagles Call Some Missouri River State Parks Home
- GFP Commission To Hold Public Hearing On License Fees
- Pheasant Shooting Hours Start at 10 a.m. For Rest Of Season
- Experience Christmas at Adams Homestead

Bald Eagles Call Some Missouri River State Parks Home

PIERRE, S.D. - Wintering bald eagles may soon be taking up residence in a few South Dakota state parks along the Missouri River. Many bald eagles typically spend their winters below the Missouri River dams where they are able to catch fish and waterfowl attracted to the open water.

Bald eagles need undisturbed roosting areas during the winter. For this reason, South Dakota Game, Fish and Parks officials are closing certain areas in state parks along the Missouri River.

Camping and vehicle traffic are prohibited during specific dates in the following areas:

- Oahe Downstream Recreation Area campgrounds, near Pierre, from Nov. 1 through March 31, 2005
- Randall Creek Recreation Area campgrounds, near Pickstown, from Oct. 1 through April 30, 2005
- Chief White Crane Recreation Area, near Yankton, from Nov. 1 through March 31, 2005

Walkers and cross-country skiers are allowed on trails in these areas, though they must use caution to not disturb the roosting bald eagles. If disturbed, the eagles may abandon their roosts.

For more information on bald eagles in state parks, please visit the website at www.sdgfp.info/Parks or call (605) 734-3391. Information can also be found in the Birding in SD State Parks booklet, which is available through the division office or your local park.

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